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ORIGINAL ARTICLES.

FIBROMA OF THE MESENTERY.[1]

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THE following history was given by the patient: Mrs. J; aged twenty-six years; family history negative; born in Russia; has lived in the United States ten years; nervous temperament; general health good; appetite good; bowels regular. Menstruation began at the age of fourteen, was regular and normal until the patient came to this country, since which time there has been quite a profuse discharge, lasting five days. She has been married three and a half years, but has not been pregnant. She had influenza three years ago. During the past two and a half years she has complained of pain in the right side, with painful and frequent urination. Four months ago she felt a tumor in the right iliac fossa, round in shape, hard, and not particularly painful on palpation. Patient states that the tumor would change its position from day to day. Sometimes it could be felt in the right iliac fossa, sometimes in the left. Careful manipulation showed that the tumor could be pushed up as high as the ensiform cartilage when it was located on the right side, and when the tumor was pushed into the right iliac fossa the pain would disappear. After eating a full meal she felt distressed and nauseated and on several occasions vomited.

From the history given, one can readily see that there is nothing definite from a diagnostic standpoint. There are a few things, however, which are of value, but which were not especially so before the operation. When the patient was examined in my office, the tumor was easily palpable in the left iliac fossa, or, better, down in the left side of the pelvis. By bimanual palpation I could lift it out of the pelvis, but could not carry it upward to any degree, as she was sensitive to pressure. She did not state to me at the time that the tumor had ever appeared on the right side, or that she was able to elevate it at any time as high as the umbilicus. After careful palpation of the tumor it was ascertained that it was round and hard; it moved independently of the uterus, and from these findings I made a diagnosis of fibroma of the left ovary. I could not displace the tumor to the right of the spine at that time, which was doubtless due to the sensitiveness and contraction of the abdominal wall. When she was under the influence of an anesthetic, the tumor could be displaced out of the pelvis and well up in the abdominal cavity as it passed over the spine to the right side. The other symptoms had no definite relation to any intestinal lesion. The symptoms were those of uterine or ovarian rather than those of intestinal disease.

The tumor was hard and almost equally divided in halves by the mesentery. It appeared to have grown within the mesentery and spread equally from both sides of the mesenteric vessels. It was ovoid and about three inches in diameter. I was unable to palpate the intestine as it passed over the tumor, but I was able to discern an irregularity on its surface in the bimanual examination. Another feature to be noticed is that the intestine, the mesentery of which was involved, came down close to it for its entire circumference. This is peculiar to growths situated in this particular region, that is, a comparatively small tumor involves the vessels supplying an enormous area of intestine.

At the operation, as soon as the abdomen was opened, the tumor was brought into the center of the field, its mesentery ligated and twenty-four inches of the ileum excised with the tumor. Only one mesenteric ligature was used, as I compressed the mesentery after my usual plan with a uterine clamp and placed the ligature in the groove produced by the clamp, the "bite" of the ligature then having nothing but vessels and peritoneum in its loop. End-to-end union was made with button No. 3 and the rent in the mesentery closed with cutgut in a fine Mayo needle. Union was produced four inches above the ileocecal valve. The situation of the tumor low down in the mesentery prevented displacement upward on the left of the spine before operation. There is another point to which I wish to call attention and that is the small hematoma extending to the end of the loop of intestine at the site of the ligature. After I had clamped the mesentery and had applied the ligature, there was bleeding from one of the vessels in the side of the vertical incision. I put in a row of sutures, including both peritoneal layers of the mesentery in order to stop the venous hemorrhage, including in the suture a vein that drains this two-inch area, with the resultant hematoma. This brings up a matter I mentioned many years ago in connection with resections of the intestine, that is, one should remove as much of the intestinal wall as he has interfered with the vessels supplying that wall, regardless of the extent of disease of the wall itself. It has been the cause of many failures of union in intestinal resection that the arteries were ligated in the mesenteric base and the intestine which they supplied was allowed to remain with the result that gangrene followed. The danger is not so great from the ligation of the arteries as it is from obstruction of the veins, as is illustrated here, for the artery was

[1] Case presented to the Chicago Medical Society.

not included in the ligature, but the vein alone. As a result of occlusion of the vein, there was immediately extensive ecchymosis into the mesentery from the blood brought by the parallel anastomotic artery. I found from my experiments upon dogs that this frequently occurred.

In connection with tumors of the mesentery I might say they are rare and the literature is meager. They are well divided into cystic and solid neoplasms.

Mensenteric Tumors.

- Cystic.
  - 1. Traumatic: Sanguinous. Serosanguinous. Serous.
  - 2. Lymphatic. Chyleous (the latter the most common.)
  - 3. Dermoid (or congenital.)
  - 4. Parasitic (hydatid.)
  - 5. Displacement cysts from neoplasms.
  - 6. Tuberculous.
  - 7. Cystic sarcomata (Moynihan.)

  Harris and Herzog collected 57.
- Solid.
  - Carcinomata,
  - Lipomata.
  - Sarcomata.
  - Fibromata,
  - Fibrocartilaginous,
  - Chylangiomata,
  - Adenolymphomata,
  - Malignant lymphomata,
  - Osteomata,
  - Endotheliomata.

Cystic tumors occur about twice as often as solid tumors. One hundred and twenty-three cases of the former were collected by Begouin to thirty-three of the latter. The cystic tumors of the mesentery are made up of dermoids or the congenital cysts that occur in the mesentery from embryonal remnants, always in females (Moynihan). They are made up of dilatations and occlusions of the chyle ducts. They are made up of remnants of the peritoneum; these cysts have a serous lining. It is a peculiar fact that we rarely see a cyst of the mesentery that has an epithelial lining, with the one exception, the dermoid. While these cysts may attain an enormous size and contain frequently several gallons of fluid, Lathuraz having removed one of forty pounds, they carry with it all the time a modernate dilatation of the arc of intestine over it, and at no time do they cause gangrene of the intestine. They occur at all ages from eleven weeks (Frederic Eav) to old age. They produce few symptoms usually until they cause pressure. They are practically painless, smooth, and movable, and continue in this way until they involve or encroach upon the neighboring tissues or organs, when they cause symptoms referable to the particular organ pressed upon. They may cause symptoms of ileus of the obturation variety. They occur usually in the upper portion of the small intestine, infrequently in the lower portion. In that sense they may be contrasted with the solid tumors to a certain extent, as these more frequently occur lower down. They are usually unilocular and single, except when chylous; then they may be numerous; W. H. Wenning reported as many as fifty in a single case.

The differential diagnosis between ovarian, pancreatic, renal and retroperitoneal cysts has not been frequently made before the operation or autopsy, and when the tumor is large it is practically impossible to make the differential diagnosis. The only important sign is the presence of an intestinal coil anterior to and adherent to the tumor. This we know to be deceptive from our experience with adherent intestine to other varieties of cysts in the abdominal cavity. When the abdomen is opened, sometimes the differential diagnosis can be readily made. At other times it will be found necessary to evacuate the cyst contents before its true location can be determined. Keith says that they should not be disturbed unless they produce grave symptoms.

The treatment of these may be divided as follows: (*a*) Aspiration. Begouin collected seventeen cases of puncture with aspiration with nine recurrences. Barquehaye collected sixty-two cases with forty-seven recurrences, seventy-five per cent.; there was not a single death or unpleasant sequence. As would be expected the chylous cysts were the most frequent in recurrence after aspiration. Hochenegg strongly favors this method of treatment. (*b*) Puncture with fixation of cyst-wall in abdominal incision and drainage (Spencer Wells, Lawson Tait and others). This procedure had a mortality of five per cent. in nineteen cases collected by Péan. (*c*) Primary enucleation of cyst. This is an extremely dangerous procedure. Begouin found a mortality of sixty per cent., shock, peritonitis, and intestinal gangrene being the principal causes of death. Péan found seven deaths in eighteen cases operated by extirpation, a mortality of thirty-seven per cent. We can therefore conclude that primary extirpation should be resorted to only when the cyst is small and a small portion of the base of the mesentery involved. The interference with the mesenteric

FIG. 1.

circulation even for an inch or an inch and a half at its base may jeopardize the vitality of an enormous portion of the intestinal tract, as we know that the entire mesentery at its attachment to the spine is variously estimated at from four and a half to eight inches, carrying at its periphery twenty-two to twenty-seven and a half feet of intestine. (*d*) Primary drainage with secondary enucleation. This can be accomplished in the class of cysts in which ablation of the cyst-wall is necessary, because, owing to its histological structure, it cannot be expected to heal by simple drainage (dermoids, ecchinococcus and chylous cysts). These, however, can be enucleated with little danger when they are greatly reduced in size by drainage.

The solid tumors are of many varieties from a histological or pathological standpoint. They represent about thirty per cent. of all the mesenteric tumors. Histologically they consist of (*a*)

FIG. 2.

epithelial and endothelial growths (carcinomata and endotheliomata); (*b*) connective-tissue growths (sarcomata, fibromata, lipomata); (*c*) lymphoid growths (lymphomata); (*d*) vascular growths (angiomata and lymphangiomata); (*e*) nerve-tissue growths (neuromata); (*f*) chylangoma.

The latter are essentially retention-cysts and do not properly belong with solid tumors. The above tumors undergo numerous changes, such as chondrification, ossification, caseation, etc. They vary greatly in size and situation. They occur most frequently in the lower portion of the small intestine and may attain an enormous size. Terillon removed a lipoma weighing fifty-nine pounds, Van der Veer one weighing fifty-six pounds, Péan, fifty pounds, Shepherd, a myxofibroma weighing thirteen pounds, and Brookhouse a fibroma weighing thirteen and a half pounds.

The importance of a tumor in the individual case depends upon its histology and its anatomical relations to the vessels of the mesentery, as well as upon its size. The lipomata, the largest of the solid tumors, are often encapsulated and can be shelled out of the capsule without materially interfering with the blood supply of the intestine.

Of the solid tumors occurring in the mesentery, the most common is carcinoma, secondary to carcinoma in some other position. Next in frequency is the fatty tumor; next the sarcoma, and, after it, the fibroma, to which class the tumor in the case reported belongs.

In reviewing the histories of these cases I was unable to find in the literature more than eleven cases of fibroma of the mesentery. Those are recorded all the way from 1824 down to the present time, as shown by the following table:

FIBROMATA.

Brichiteau.	1824	Paris.	Fibrocartilaginous.	
Duhamel.	1863	Paris.	Fibrous.	
Cooper-Foster.	1867	London.	Fibrous lipoma.	
Dickinson.	1870	London.	Fibrous.	
Ladmiral.	1874	Paris.	Fibrous	
Koenig.	1890	Berlin.	Fibrous.	
Brookhouse.	1890	Nuttingham.	Fibrous.	
Belkowsky.	1893		Fibrous.	
Shepherd, F. J.	1897	Montreal.		13.5 pounds, 8 feet intestine, recovery.
Vinc.	1899	Mitrovitza.	Fibroma.	
Lexar.	1900	Berlin.	Fibrous.	
Murphy.	1901	Chicago.	Fibroma.	

Of the solid tumors of the mesentery the one most frequently diagnosticated was sarcoma. Something like a year and a half ago I saw a case of this type in consultation with Drs. Bodoin and Cartledge of Louisville. The patient was a very prominent man of that city, who had a tumor growing at the beginning of the mesentery just below the left costal arch. The tumor gradually increased in size, and what led to the diagnosis of sarcoma of the mesentery was the fact that the soft intestinal coil could be palpated over the apex of the tumor, and, as the tumor was fixed, it led to the statement that it was irremovable. The patient, however, insisted upon the performance of an exploratory operation, which was made. The small specimen removed was examined with the microscope and demonstrated to be a lymphosarcoma of the mesentery.

Professor W. A. Evans gives the following report of the specimen I present to-day: "Sections demonstrate that this is a fibroma. The fibers are mostly wavy, long and parallel in arrangement. In other zones the fibers are loosely arranged and the interfibrillar spaces have been filled with some soluble material. The blood-vessels are not very heavy walled. The cells are either long, narrow and deeply staining, or round and vesicular as shown by staining. There are no myxoma cells."

Fibromata do not appear so near the base of the mesentery as the sarcomata. The fibromata appear usually close to the intestinal wall; the sarcomata lower down, even in the retroperitoneal tissue, and on this account they greatly endanger the patient's life by any operative procedure.

The gravity of operation depends largely upon the extent of the intestinal tract that is necessary to be removed. Dr. Francis J. Shepherd removed a tumor situated deep down in the mesentery which on account of its size also formed a close attachment to the intestine and required the removal of eight feet of the intestine in its extirpation. The patient made a good recovery, even after such an extensive intestinal resection, which I believe is one of the largest on record from which a patient has recovered.

The danger of the operation consists, first, in shock and second, hemorrhage from the mesentery in separating a tumor with close attachment to the intestine.

According to the statistics given by Drs. Harris and Herzog in their joint paper, they show that forty per cent. of the cases die as a terminal result of mesenteric tumors. They do not mention the differentiation between those cases that die from the disease after the operation and those that die from the disease without operation, but simply that forty per cent. die. In looking over the literature of operations more recently collected, I find that of twenty-nine cases operated, fifteen died and fourteen recovered. There is an enormous mortality from the operation in removing these tumors, and this brings up the question, Can we in any way avoid their removal when they are either cystic or solid? Of the solid tumors of the mesentery, particularly if they are sarcomatous, there is no way of avoiding operation. As regards fibromata, in the literature it is mentioned that the blood-vessels as a rule pass directly through the tumor, and this was the condition in the case I present. Therefore there is no means of saving the arch of intestine which receives its blood-supply from these vessels.

Of the malignant neoplasms, some are encapsulated and may be removed with the capsule without materially jeopardizing the intestine. But the majority of these cases, particularly the carcinomata and sarcomata, require the removal of the mesentery for a considerable distance beyond the tumor line and necessitate extensive intestinal resection. Even then the period of immunity must be expected to be short. Many times they are so extensive that extirpation is not possible, as in the case of Drs. Bodoin and Cartledge of Louisville. In this case the diagnosis was made before the exploratory operation and verified by the physical and microscopical findings. The mortality from operation is about the same as that for primary extirpation of large cysts.

The situation is entirely different when we come to consider operations for encapsulated fatty tumors and large cysts of the mesentery. These comprise two-thirds of the tumors of the mesentery, and operative procedures for their removal are entirely different from those for solid tumors. In cysts the methods of operation have been aspiration, drainage and fixation of the cyst to the abdominal incision, primary enucleation, and secondary enucleation. The best results have been from aspiration. Statistics show that twenty-eight per cent. of the cases of cysts of the mesentery recover by simple aspiration. They further show that where the cysts have been tapped and fixed in the abdominal wound, there has been a mortality of 5 per cent., while in those cases in which the tumor has been directly removed, the mortality has reached 52 per cent. (Begouin).

There is a certain class of cases, however, that will not respond to the aspiration treatment and those are the cysts that are lined with epithelium, the dermoids. The dermoid may be fixed in the abdominal wound and drained, just as endothelial-lined cysts may be drained until contraction of the cyst-wall takes place, and then enucleated. This is the method which is particularly to be recommended in the removal of cysts in this area.

This patient was operated ten days ago. She was given liquid diet from the first and has not had an unpleasant symptom. This morning I palpated the button in the rectum through the vagina. (It was passed on the twelfth day.)

ARSENIC AND ITS COMPOUNDS; WITH SPECIAL REFERENCE TO SODA CACODYLATE.

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ARSENIC in small doses acts upon the respiration and circulation as a stimulant, but in large doses it is depressant. Whether its action as a hematic tonic is direct or not is an open question, but the fact that it increases the number of red blood-corpuscles is unquestionable.

The most marked effects of arsenic are produced upon the skin and nervous system. Experiments have demonstrated that in poisonous doses it will cause exfoliation of the epidermis. The deeper layers of the epithelium, the columnar layer, become softened, vacuolated, and separated from the connective tissue below. Sometimes the corneous is separated from the Malpighian stratum also. Dr. H. G. Piffard relates a case in which extensive exfoliation of the skin resulted in a patient who by mistake had taken a teaspoonful of Fowler's solution. Extensive desquamations have followed in cases in which it has been taken with suicidal intent. The writer remembers an instance in which a teaspoonful of the acid was fed to a pig with "homicidal intent" but the only noticeable effect on the animal was a complete exfoliation of the derma and hair. Arsenic acts directly on the epithelial cells, which become shrunken, both in cell substance and in nucleus. Brownish and grayish discolorations have been noted as effects of the long-continued administration of arsenic. Various eruptions, such as furuncles, papules and

vesicles, sometimes occur. Herpes zoster is sometimes seen in patients taking arsenic. This is probably due to a neuritis.

Almost constant effects of the internal administration of arsenic are a silvery appearance of the tongue, a slight reddening and irritation of the conjunctivæ, and puffiness of the eyelids. Large doses, or the long-continued use of small ones, may produce symptoms resembling those of poliomyelitis or multiple neuritis.

Arsenic is perhaps the most extensively used internal remedy in the treatment of skin diseases, and is probably the most valuable, provided the cases for which it is prescribed are selected. There can be no doubt of the great value of arsenic in psoriasis, its undoubted action in modifying epithelial tissue suggests its use. In eczema, not of the acute moist forms, it often acts with almost specific power. It is the only trustworthy remedy at our command in pemphigus. The papular eruptions termed lichen planus and acne yield to arsenic. It is of value in lupus erythematosus and in certain malignant diseases of the skin, epithelioma and sarcoma, etc.

In the various neuroses, chorea, neurasthenia, it is the best medicinal agent indicated. Certain cardiac and gastric neuroses are favorably influenced by arsenic. Diabetes is often cured by its use. Albuminuria dependent upon certain conditions yields readily to it. In the early stages of pulmonary tuberculosis arsenic has a *curative* action. The general nutrition is improved, the congestion and secretions of the bronchial mucous membrane are lessened, the cough is allayed, and the dyspnea relieved. Thus is the tuberculous process arrested and the patient cured.

That the use of arsenic does not always give the looked-for results along the line of diseases mentioned is not due to its inefficiency, but rather to not using it in sufficiently large doses, or in not continuing its exhibition long enough. Both of these conditions arise either from fear of its toxic effects or the actual production of them, and the remedy is discontinued. Very recently, however, the attention of the medical profession has been directed to the use of compounds of arsenic, notably sodium cacodylate. This preparation was first developed by Bunsen, but was not employed in medicine until about five years ago when Drs. Danlos and Gauthier began its use. Indications for its use are increasing daily, as it exercises a beneficial stimulating and tonic effect on all patients to whom it has been given. An almost immediate improvement in the general condition and appetite with an increase in weight is noticeable. It is eminently adapted to cases requiring large doses of arsenic and it is absolutely safe even in massive doses, being non-toxic in comparison with other arsenical compounds.

It may be exhibited hypodermically, in doses of from one to one and one-half grains daily, and up to six grains daily by the mouth or rectum. No matter in which way it is given the profound "garlicky" odor becomes discernible in the patient's breath in from three to seven days.

I herewith append brief histories of some of the cases in which it has been of decided benefit.

Case I.—S. F., female, married. History of case dates back to puberty from which time she has been exceedingly nervous. This has increased in later years. She has not been free from pain for the last two years. Complains of head pressure, headaches, backache, ovarian pains. Muscular and joint pains follow each other in succession or are all present at some time. Does not feel ill, but tires easily. Is constipated, and has periods of distressing indigestion; is anemic and has cold hands and feet. Is losing weight. On October 1, 1900, weighed 104 pounds.

Treatment consisted of the usual diet prescribed for these cases and sodium cocodylate, gr. ⅙ three times a day, before meals for ten days; then omitting remedy for same length of time. Increased dose to gr. ⅓ and gave as before. On December 5, 1900, the patient feels much better and weighs 112 pounds. Pains occur only at intervals and are of a different nature, lacking their former severity, etc. April, 1901, she is apparently well. No pains; circulation good; cheeks rosy; weight, 120 pounds.

Case II.—L. G. T., male; appearance good, physical examination negative. Complains of headache, sleeplessness and inability to concentrate mind on business. Treatment, cacodylate pill, gr. ⅗, three times a day. Subjective symptoms disappeared after the first ten days of treatment and have not returned.

Case III.—E. M. A., female, aged twenty-three years, came to Colorado seven years ago for lung trouble. Improved materially at first, but lately has "run down," lost weight, etc. Has had four attacks of "congestion or pneumonia" within the past year. Anorexia. Coughs a great deal, especially at night. Subnormal temperature in the morning, rising to 100.5° F. in the afternoon; pulse 90 to 100; dulness over right apex; upper portion of left lung consolidated.

Treatment consisted in the administration of sodium cacodylate in ½-grain doses, hypodermically, once a day for five days; an intermission of five days, and repeated in 1-grain dose for the same length of time. After the usual intermission the agent was given *per orem* in ⅗-grain doses three times a day. Result cessation of cough, appetite voracious, increasing in weight.

Case IV.—H. D. J., male, aged fifty years. Ten years ago came to Colorado for lung trouble. Had several slight hemorrhages. "Lung is now all right, but stomach is all wrong." Cannot digest anything. Gas accumulation in stomach immediately after ingestion of any sort of food and sense of discomfort is intensified, unbearably so, if anything like eating a square meal is attempted. Subnormal temperature; pulse irregular, 55 to 60; anemic; marked area of dulness over right apex: stomach dilated.

Treatment consisted in diet, milk, seltzer, zoolak; lavage; soda cacodylate, gr. ⅙, before meals. Improvement was marked from the start and still continues.

Case V.—R. E. G., male, aged thirty years. Second visit to Colorado for lung trouble. Has been here this time one and one-half years. Improved wonderfully for the first seven weeks. Had hemorrhage during October, 1899, that lasted off and on for twelve days. Temperature 103° F. During May and September, 1900, had "more hemorrhages." Very nervous; cannot sleep. Physical examination January 31, 1901, shows a temperature of 99° F., pulse 90, congestion of vocal cords, dulness over both apices, very marked on left side, weight 117 pounds.

Sodium cacodylate, gr. ⅙, was given before meals for ten days; usual intermission, then ⅓ gr. as before. April, 1901, weight is 120 pounds; temperature normal; pulse 80. He sleeps and eats well, coughs very slightly and only in the morning on first arising. Voice sounds normal.

Case VI.—B. C. D., female, married. Has lived in Colorado eighteen years. Has had "bronchial trouble" following "la grippe." Pain under right scapula, sleeps well. Appetite good, but "bloats" after meals and is losing weight. Complains principally of eczema all over; skin itches, and peels off. Temperature is subnormal; pulse 90; lungs and liver normal; stomach dilated and very tender to pressure.

Lavage was prescribed, also sodium cacodylate, gr. ⅙ and increased as indicated in the preceding cases. The lavage gave relief at once. After thirty days the eczema disappeared and the body weight is increased.

ACUTE PERITONITIS: ITS TREATMENT UPON AN ETIOLOGICAL BASIS.[1]

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IN our student days we learned that the peritoneum is an immense serous membrane lining the walls of the abdomen, covering and protecting the organs contained therein. We learned that it is a closed bag, and that, by commencing at any place and winding the bag around the organs in a certain way, we could cover all the organs and arrive at the starting point. So we gathered up the bag and followed its meanderings "up hill and down dale," we treked along over the veldt, we jumped from kopje to kopje, from the liver to the stomach, and then took a long trail off into the omentum; turning back upon our tracks, we groped on in the by-ways and passages and turns and reflections; we struggled on and on, anchored it down here and there, to hold an organ fast, or to suspend another, or perhaps to get our own wind and bearings; we left one side of the bag behind, and tugged away at the other, and, just as we thought we were getting out of the woods, alas! we fell into a snake-hole called "the foramen of Winslow," and got swallowed up in the lesser cavity, and were unable to pull ourselves out of the morass to follow the windings of the other side of the bag.

If we could never satisfactorily unravel the puzzle of the peritoneum, in all its reflections and turns, we found out that there is plenty of it to cover all the abdominal organs and to separate one from the other. When we learned that the whole glistening surface of the peritoneum is crowded with stomata connecting with lymph-channels, that, in fact, the peritoneum forms a great lymph-space, we can imagine what a wonderful power it has for absorbing liquids, whether innocuous or poisonous. So great is this power of absorption that experiments show that the peritoneum is able to absorb in one hour more than five per cent. of the body weight.

In health the peritoneal membrane acts as a mechanical protection to the abdominal organs. Under the influence of certain irritations it develops new processes which, later we call adhesions, and these act as barriers to ward off infection. To show the importance of this protective power of the peritoneum, and also the frequency of peritoneal inflammation, Byron Robinson, after 170 autopsies, says, "Scarcely ever an adult can be found without peritoneal inflammations."[2] These chronic adhesions showed where there once had been acute inflammations—they were the efforts of Nature to limit a bacterial invasion, it may have been an appendicitis, a salpingitis or a traumatism to the peritoneum. But for these barriers there would have been an extension of septic materials.

Within the past two decades, thanks to the studies of the pathologist and the boldness of the surgeon (fortified by an aseptic conscience) we no longer look upon peritonitis as a disease *per se*, but only as a symptom of some other pathological condition—in other words, it is never primary but always secondary. We now look upon peritonitis as due to a germ infection, and if we follow up the sources of entrance of the micro-organisms, without which there can be no peritonitis, we come to the true causes of inflammation of the peritoneum. It is then that we will look upon peritonitis not as a disease, but really Nature's effort to ward off disease, and, as we will learn under treatment, our efforts should be directed, not against the local irritation or peritonitis, but against the onslaught of bacteria, and we will find the peritoneum itself our best assistant. Robinson says, "Peritonitis is Nature's method of repair and prophylaxis. Peritonitis saves life, while infection kills."

Those cases of peritonitis which seemed to be primary—that is, those in which no obvious cause could be found from an *ante-* or *post-mortem* incision—may have been due to bacteria which entered through some slight abrasion of the mucous coat of the intestine, which on examination was masked by the products of inflammation; or it may have been due to an injury of the abdominal wall, however slight, yet quite sufficient under certain conditions to give entrance to micro-organisms. When we call to mind that the intestinal canal is swarming with colon bacilli

[1] Read before the Hudson County Medical Society.

[2] N. Y. Medical Journal, Jan. 25, 1896.

and other bacteria; that the mucosa may be injured by hard masses of feces or foreign bodies; that the resisting power of the patient or his peritoneum may under some conditions become diminished, it does not require any great stretch of the imagination to follow the track of the germ from its habitat in the bowel to the point of attack on the peritoneal membrane. These are the cases which are called primary or idiopathic, when our knowledge is not complete; or when there has been a history of rheumatism, syphilis or Bright's disease, have been called rheumatic, syphilitic or nephritic; but such can only very remotely be called predisposing causes.

Some of the avenues for the entrance of bacteria to the peritoneum are the following: (1) Any injury or disease of the alimentary canal sufficiently intense to cause a perforation, notably appendicitis, and less frequently ulcers; (2) any obstruction, such as invagination, intussusception, or strangulated hernia, which causes a necrosis of the gut; (3) septic conditions of the abdominal or pelvic organs, such as abscess of the liver or kidneys, and especially disease of the Fallopian tubes, giving rise to pelvic peritonitis; septic conditions of the postpartum uterus, giving rise to puerperal peritonitis, this latter often being classified under a distinct heading; (4) traumatism from within or without the lumen of the bowel, or traumatism to the abdominal wall, such as penetrating injuries caused by gunshot or stab wounds, or traumatism caused by operations.

Without going into the clinical pictures of peritonitis from its various causes, or even the variable clinical picture from any one cause, it is well to remember that peritonitis, as we term a certain group of symptoms, sometimes very distinct and again anything but distinctive, does show a wide range in its manifestations, subjectively and objectively. Sometimes the primary disease so gradually merges its symptoms into the secondary disease that it is hard to tell when the peritoneum has become infected. Again, especially if we do not know the history of the case, the peritonitis completely masks the underlying disease. The symptoms to a certain extent depend upon the degree of infection of the peritoneum which gives rise to Senn's pathological division in his classification. He distinguishes four varieties, (*a*) diffuse septic, (*b*) suppurative, (*c*) serous, and (*d*) fibrino-plastic.[3] We can by no means make out beforehand these distinctions. They really represent different degrees of infection, or, to put it in another way, they represent different degrees of resisting power of the peritoneal membrane. It is for the reason that it is impossible to tell beforehand the condition of the peritoneum, or, to speak in proper terms, the amount of septic invasion of the abdominal cavity, that some surgeons operate in all cases of appendicitis, the commonest source of infection of the peritoneum.

In operations for appendicitis we will find in one case a localized peritonitis, in another case, localized suppuration, and in a third, a general septic peritonitis; and what we do find will often not correspond with what we expected to find. Take a case of pelvic peritonitis. What a variable picture it presents! Some cases with distinct symptoms of marked sepsis readily clear up, and *vice versa;* others, beginning mildly, are followed by sequelæ entailing various chronic conditions which cause a patient to be bed-ridden for weeks and months.

There are many factors bearing on the question of invasion of the peritoneum by bacteria. The peritoneum may be more or less resistant; the particular germ invading the peritoneum may be more or less virulent; the absorption of the bacteria and their products may be rapid or slow; and the quantity of the poison introduced may be little or much.

Abbe says, "Experimental research shows that when a small amount of infectious culture of intestinal bacteria is injected it can be disposed of without fatal effect. A small quantity produces diarrhea, more a local peritonitis, still more a fatal fibropurulent peritonitis, and a larger dose. acute fatal sepsis without peritonitis."[4]

Again, bearing on this question is the individual resistance of the peritoneum. We can all look back and call to mind at least one case of laparotomy in which we could not find any break in the chain of asepsis and expected a speedy recovery, and yet about the third day we saw looming up a direful case of fatal peritonitis. On the contrary, we can remember cases in which we found such conditions as would lead us to expect an infection of the peritoneum, and yet everything went along serenely.

I would turn quickly from this aspect of the subject, as it might influence some one to trust to fate, instead of to asepsis; although it takes the burden off of our shoulders to some extent, to hear what as great laparotomist as Kelly says: "The more we learn of infectious processes, the more are we convinced that the vital resistance of the patient plays an important, if not the greater part in the resistance to infection."[5]

The place or particular part of the peritoneum where the infection occurs often determines the degree of peritonitis or sepsis. If the bacteria enter through the small intestine, so quickly are they disseminated by the free movements of the bowels that there is apt to be a disseminated peritonitis; if the infection is from the iliac fossæ or in the pelvic cavity, there usually develops a circumscribed or suppurative peritonitis. If the infection is due to the colon bacillus, the usual germ found after infections from the alimentary canal, there may be a very virulent or a mild sepsis. Staphylococcus infection is, as a rule, not very virulent, while an infection by the streptococcus is apt to be disastrous.

Treatment.—As peritonitis is a secondary disease, it is self-evident that the primary disease should be treated. If we look upon peritonitis as

[3] MEDICAL NEWS, May 8, 1897.

[4] MEDICAL NEWS, May 29, 1897.
[5] Kelly, Operative Gynecology.

an indication of absorption of micro-organisms and their products, irrespective of the source of their entrance, the treatment necessarily resolves itself into the prophylaxis of sepsis and the elimination of septic products when once introduced. It is to this general aspect of the question of peritoneal sepsis that the remainder of this paper will be limited.

To prevent the entrance of bacteria to the peritoneal cavity when a traumatism is caused, as in abdominal operations, it is essential that surgical cleanliness be maintained. We avoid depressing the vital powers of the patient by dispatch in our work, by the use of heart stimulants, such as strychnine, and general stimulants, such as injections of hot normal saline solutions. We prevent the resisting power of the peritoneum from being lessened by refraining from unnecessary handling and exposure of the peritoneal membrane. Although surgeons do not look upon the peritoneum with such reverence and fear as in pre-aseptic days, still, it should be handled firmly but gently, confidently but not recklessly, as we may need its help to do picket duty against an unexpected assault by some lurking germ.

After operations, if we find conditions that would cause us to be anxious as to subsequent infection of the peritoneum, or if we see signs of infection already beginning, we make use of the intestines to eliminate the poison. It is upon this principle that the newer and best method of treatment, that by catharsis, depends. Hence we use saline cathartics, or, if the stomach is irritable, calomel in small doses. McCosh, for this purpose, injects into the lumen of the bowel at the time of the operation a saturated solution of Epsom salts. In the course of those diseases which furnish avenues for the entrance of bacteria to the peritoneum, the same principle applies as to the use of cathartics. In the treatment of the primary disease before peritoneal sepsis has commenced, or after it has already set in, the question, Shall we give opium to relieve the pain, or shall we give cathartics to relieve the sepsis, will often arise.

Since the causes of peritonitis are better known and the conditions met with better understood—that the danger is not from the amount of the peritonitis, but from the amount of sepsis—the opium treatment has been superseded by the more rational treatment, that by catharsis. Cathartics should be used instead of opium, because we thus eliminate the poison and prevent or lessen tympanites, which may be the most distressing symptom to the patient. Opium was used with the idea of checking peristalsis to lessen the peritoneal irritation, but we know that it locks up the poison as well as the bowels, and increases the tympanites. But there are cases where it requires the courage of one's convictions and, as the laity would say, "hardheartedness," to carry out this line of treatment to its logical conclusion. Suppose one is called to a case of beginning peritonitis from some tubal trouble, the commonest source of peritoneal infection in females. Before any grave constitutional symptoms arise, there may be the most agonizing pain, and it would require an adamantine heart to resist the giving of quick relief afforded by morphine. Yet we believe that much of the long and tedious ensuing sickness and suffering might be avoided by stuffing our ears, as did old Ulysses, and by giving a brisk saline cathartic, instead of listening to the Siren's cries for opium. For the relief of the pain we may get some help from external applications of ice, and internally we may cautiously use some of the coal-tar derivatives. Until the cathartic accomplishes its purpose we might, in some cases, be justified in using hypnotic power.

To get the beneficial effects of cathartics the treatment should be instituted in the very beginning, before the peritoneum has become thoroughly septic. We cannot carry out this line of treatment in perforations of the intestines, as we would be adding fuel to the flames. Here the only treatment of any avail would be to operate and repair the perforation.

Before the operative treatment is taken up, a few words as to general treatment may be said. As a peritoneal infection is very depressing to the patient—we may say, a veritable "solar plexus blow"—we should combat the weakness and keep up his strength by alcohol and the usual stimulants. The tympanites is best relieved by the use of the rectal tube, and I have time and again seen the aspect of a case change for the better after the escape of gas through the tube. One of the most striking cases that now recurs to me was that of a boy operated on for suppurative appendicitis. About the third day tympanites was so marked and the depression so great that it seemed the patient would quickly succumb to sepsis. The tube was passed high up, and gas freely escaped, then a copious fecal discharge passed, after a high enema, and the patient immediately got better.

In cases in which the septic products have not been eliminated, but the peritoneal barriers have been sufficient to limit or wall off the septic process—that is in localized abscesses of the peritoneal cavity—a type we see in some cases of suppurative appendicitis, or in collections of pus in the pelvic peritoneum, the indications for treatment are to open and drain. In some of these cases, for fear of breaking up adhesions, we are apt to do too little and leave other foci of infection. This question was so thoroughly and ably discussed by Dr. Gray at our last meeting that I will take up that formidable type of peritoneal infection, called general or disseminated peritonitis, in which the barriers of Nature are swept away by the septic flood.

We may see this type after a perforation of the alimentary canal in which a large quantity of septic material is quickly introduced within the peritoneal cavity, or by rupture of an abscess wall, or, occasionally, after operations, or by extension from a septic uterus. If, occurring after an operation, the patient is so overwhelmed by the poison that we may try to ease our conscience by attributing the death to shock, and we may try to

prove it *postmortem*, as we find but little irritation to the peritoneum. In some cases disseminated peritonitis develops so quickly that the primary disease is completely masked and the patient is often beyond the reach of help by any treatment. We might here use opium as a means of ewthanasia. I saw a case of this quickly fatal type about two months ago. The patient while convalescent from influenza was taken suddenly with cramps. The attending physician, thinking it an attack of acute indigestion, did not feel apprehensive. The next day through stress of work he did not see his patient till five o'clock in the afternoon—about thirty hours after the attack of cramps—when to his amazement he found him in collapse. I saw him at this time and we decided that the alarming peritonitis was probably due to a fulminating case of appendicitis, and that if he responded to stimulants we would operate. But in spite of our efforts he steadily sank and died before morning.

Up to within a few years ago cases of disseminated peritonitis were looked upon as inevitably fatal, but recognizing that if we can open the abdomen in the early stage of the disease and cleanse the peritoneum of the septic products, some cases may be saved, surgeons now feel justified in making this effort, and giving the patient some chance of life. While we may not be able to cleanse every nook and corner of the infected area, we can certainly remove some of the poisonous products, and this is infinitely better than to allow the peritoneal cavity to be literally deluged by the poison.

To get the beneficial effects of this treatment, as we would naturally expect the statistics to show, it should be carried out as early as possible and before the vital powers of the patient are too much depressed. The whole area infected should be cleansed, and gauze drains placed in the iliac fossæ, between the coils of intestines in the pelvic cavity, in the region of the liver and in places where infectious material is concentrated. If there are only small purulent foci these should be sponged off with pieces of gauze wrung out of salt solution; if there are larger collections more can be accomplished by copious irrigations of hot salt solution.

Serum therapy has aided in the cure of this type of peritonitis, and much more may be hoped for when the proper serum can be found and used for the particular case in hand, that is, for each bacterial invasion the corresponding serum can be used.

I can see at no distant day a picture which I will label "Hope Astride Science." In this picture I see a patient on the operating-table, and, although his peritoneum has been invaded by hordes of bacteria, still he has a hopeful expression on his face, so confident is he in the science and skill of the medical men around him. There are five of these men of science, all arrayed in spotless gowns, all working in harmony and with clock-like precision. First is the electro-therapeutist, who turns on the X-rays and marks out the infected area; second, is the spinal anesthetist, who dulls the patient's pain, but not his senses; the third is the family physician, who still looks out for the general welfare of his patient; the fourth is the surgeon, who opens the abdomen, and, while he performs the peritoneal toilet and places the drains, the last man of science, the pathologist, takes his specimen of poison, places it under the microscope, names the germ and applies the proper antitoxin.

Take another picture, drawn from the past; it is called "Despair Lashed to Conservatism." In this picture I see great crowds of young men and women and children and the aged, of all colors, nationalities, and walks of life, but all with the same Hippocratic expression suffused over the whole face except the eyes, which have that ecstatic look given by the poppy; each presses one hand over the right iliac region, and in the other holds aloft a scroll, and on every scroll I see this couplet, printed in red letters:

Peritonitis! the Doctors cried;
Opium, the Doctors plied.

102 Grand Street.

A PLEA FOR THE BETTER APPRECIATION OF THE LIMITATIONS OF OPERATIVE WORK.[1]

BY A. M. CARTLEDGE, M.D.,
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AT the outset permit me to say that I fully recognize the risk to criticism one incurs in attempting to define rules for the guidance of the many in a question of such magnitude as the title of this paper embraces. Every surgeon must be his own arbiter in deciding such questions, and the judgment he displays will depend upon his professional learning and wisdom. Yet we are at times led to believe that some otherwise brilliant surgeons are masters in nearly everything connected with our science and art except this very important point. There are many reasons for this. Our advance has been so rapid and the conquest of disputed fields so dazzling that it is natural in some instances that an unwarranted enthusiasm should be developed. Again, short-cut roads to diagnosis are responsible for many unjustifiable surgical operations.

The methods of surgical diagnosis have undergone striking modifications within the past decade and have curiously influenced operative work. The older surgeon made his diagnosis of abdominal and pelvic lesion slowly, the accuracy of such diagnosis depending largely upon his skill, which skill at that time consisted of a delicate sense of touch, trained eye to detect asymmetry, keen ears to differentiate sounds elicited by percussion, and methodical investigation of all symptoms both subjective and objective. The result was, his diagnosis having been made, he next carefully and with abundant time before him considered the advisability of operative intervention. It is true he often found, after exploration, his

[1] Presidential address delivered before the Southern Surgical and Gynecological Association, Atlanta, Ga.

most cherished diagnosis a fancy, but, where the conditions did coincide with his carefully-arrived-at conclusions, he was in position to bring the best judgment to bear in his operative methods. Later, when evolution in surgical diagnosis reached the stage where greater accuracy was demanded, the exploratory incision for diagnostic purposes was inaugurated. The result was that the finer arts, which constituted the personal skill of the older surgeon in diagnosis, from disuse have fallen into atrophy and, I am sorry to say, with some men seem to be lost or, more correctly stated, never have been gained.

Diagnoses made thus rapidly and more accurately had one drawback in that the revelation was so sudden as to place the surgeon in the position where he must decide the question of operative limitation quickly and without the judgment which sometimes comes of more deliberate thought. That this necessity for quick decision has developed rapid mental deduction from a given abdominal condition is attested by the brilliant work of abdominal surgeons in every part of the world to-day; that it also leads to transgression of surgical limitations or possibilities is one of the purposes of this paper to show. Asepsis, by removing the greatest danger in operations, has led to some unwarranted operations which have been little short of unreasonable experiments.

It is as much a part of the knowledge of surgery to know its limitations, or what it cannot do, as to be justly proud and ready to perform that which it has every good reason to believe will be productive of relief and cure to the thousands of unfortunates who seek its aid. From every standpoint there is much to be gained by a better appreciation of our operative limitations. It is a poor balm to our wounded pride and poor solace to the departed one's friends for us to say, "Well, he (or she) would have died anyway from the disease in a short time." We should remember that, while ours is not an exact science, it is daily becoming nearer one and the people, or what we are pleased to call the laity, setting the standard by our brilliant achievements of recent years, practically consider it so now. If we cannot do good, let us avoid doing harm; this is a good rule to guide us in performing surgical operations.

It is not to be inferred that carefully planned work coming under the usual head of experimentation should never be undertaken, for without such originality and boldness in the past, we would not enjoy the wonderful achievements of our science to-day. We would plead for more careful diagnosis with an especial view to the detection of attending visceral disease; in short, to try and become more expert prognosticians.

There are two phases of surgical practice alone, the careful observance of which would reduce the mortality of surgical operations so low as to cause us to believe that exactness had almost been reached. I refer, first, to greater care in the detection of kidney lesions and the institution of measures to correct this frequent cause of unfortunate operative termination, and, second, the still prevalent practice of operating upon hopeless cancer cases. We cannot honestly place the disastrous terminations from these in the category of accidental, unforeseen and unavoidable happenings. I venture the assertion that there is not in this audience a surgeon who, if he reviews his mortality for the past two years, but will find that fifty per cent. of such mortality was from causes that he should have averted, either by displaying the excellent judgment not to have operated upon inoperable cases, or by dereliction in not preparing against a weak point prior to operation. We all detest a surgeon who will operate only on selected cases, avoiding risk to save his reputation—he does not deserve the name of surgeon—but we can go too far in the other direction and in our enthusiasm to relieve humanity give too many so-called "only chances" which as often prove to be "last chances."

In reviewing the field of abdominal and pelvic surgery, it would seem that surgical limitation is most often exceeded and mortality unnecessarily increased in operations for general septic peritonitis, extensive carcinoma of the ovaries, uterus and intestines, and in operations upon the gall-passages in long-continued and profound cholemic patients without adequate preparation.

I beg your indulgence for what may seem a protest against the too-frequent practice of operating in these affections. We have every reason to believe that the advocacy of laparotomy in general septic peritonitis by those high in authority in abdominal and pelvic surgery has led to the performance of this operation by those of less experience in utterly hopeless cases of the disease. It is easier for the experiencd surgeon to say at the bedside that a given case is hopeless from any line of treatment, or is a justifiable one for operation, than to describe on paper or by means of discussion, the differential points which should determine action. Every man's experience will ever remain his most impressive guide, and certainly those with little experience in operations for general septic peritonitis must either be impressed with the teachings of those in authority and who have had experience, or their early work will be fraught with a high mortality in this class of cases. I am not prepared to say that cases of general diffused septic peritonitis have not been saved by laparotomy, irrigation and drainage; certainly the reports of such cases have appeared in our literature from time to time; but I am prepared to say that up to the present, the mortality of such operations in exaggerated types of the disease is so great as to make it an unwarranted procedure, I am strongly impressed with the belief that the successful cases reported have been cases of beginning general peritonitis, or of widely extending yet circumscribed peritonitis. We all know the difficulties that sometimes attend the recognition of the extent of the lesion. Given a case where a focus of virulent infection has suddenly emptied its contents into

the peritoneal sac at some point, be it the appendix, a septic tube, or intestinal lesion, if the sepsis has rapidly augmented, spreading to the entire peritoneal covering, characterized by no adhesion of limitation, manifesting itself objectively by a pulse-rate of 140 to 160, great abdominal distention, paresis of the intestine from toxemia and gas which precludes the possibility of attaining results from purgation, and the destruction of abdominal breathing, I do not believe that any surgical operation which has for its purpose the administration of an anesthetic, opening the peritoneal cavity with its subsequent drainage, can be other than productive of the greatest harm and hasten the usual disastrous termination.

In reply to the argument which may be made that if two such cases out of a hundred can be saved by this procedure, it would still be justifiable, I would say that a painstaking observation of a great number of these patients has led me to believe that probably five per cent. would be saved by Nature aided by such measures as sustaining the patient's heart, the free use of saline infusions, etc. Of course we recognize that the question will ever arise as to the accuracy of the diagnosis. And here, again, I must say that we have our experience at the bedside to assist us in this decision; but of one thing we feel sure, and that is that we have all in the past operated upon many of these cases that were hopeless, that we have thus swelled our mortality list and, to that extent, have brought surgery into disrepute.

Much might be said by way of elaboration in differentiating the operable and inoperable cases of septic peritonitis. Certainly we are often able to save patients with a beginning diffused septic peritonitis, and it is in distinguishing how far the case has advanced, whether or not it has transgressed the operative stage, that our wisdom is asked to decide.

It seems pertinent to suggest that in general septic peritonitis we should pay especial attention in deciding for or against operation to the following points: The duration of the disease and the condition of the intestinal tone. Cases of diffused septic peritonitis of more than eighteen hours' duration do not promise any relief from operation. Cases of diffused septic peritonitis where careful auscultation and other tests show that the vermicular action of the bowel has been lost promise nothing from operation. I have found a most excellent working rule in these cases to be as follows: If we cannot move the bowels before operation in cases of diffused peritonitis, we will never be able to move them afterward.

It would seem opportune for us to institute a careful scrutiny of our work in the fields of uterine, ovarian and intestinal carcinoma. These, especially the former, constitute a large part of the work that we are called upon to do, and, while a paper dealing thus generally does not permit of going into the details of this particular subject, certainly we have exceeded our surgical limitations in operating upon inoperable cases of cancer, especially of the uterus. Unless we approve of removing the uterus for cancer as a palliative measure, which is of doubtful propriety, there are few cases of uterine carcinoma in which we can hold out any promise of non-recurrence to the patient by radical operation. There will probably be a time when we will see a larger percentage of co-called favorable cases. The results of operative intervention will then be more promising; but the practice in many quarters of removing carcinomatous uteri where the disease has extended widely into the pelvis, the pelvic glands, and frequently to both the bladder and rectum, can have but one effect—if we are honest in our statistics—and that is to increase our mortality unnecessarily, for there must be a mortality in these cases although it be small.

The same is true of attempts at removal of double ovarian carcinoma where the broad ligaments and frequently the peritoneum are involved. It seems that many of these patients could be spared even the minor danger of exploration if we would exercise greater care in our method of diagnosis.

Perfect scientific honesty demands that we should pursue but one general plan in deciding upon an operation for carcinoma situated anywhere in the body, and that is, if it be not possible to extirpate it entirely and radically, not to attempt radical operation at all.

Before closing these desultory remarks I wish again to impress upon the members of this Society the great importance, as a means to lessen mortality, of carefully preparing cholemic patients before subjecting them to operation. We all known that patients suffering from long-continued and profound jaundice are undesirable surgical subjects. We are not warranted in subjecting these patients, whose kidneys and often hearts have become diseased from long-continued circulation of bile in the blood, to an operation until we have instituted measures now in our possession which gradually relieve these complications and increase the chances of their recovery fully fifty per cent. I refer in this connection to the systematic use of the normal salt solution for a period varying from one to three weeks prior to operation.

Another class of patients amenable to the same course of preliminary treatment are cases of inefficient renal action. We are not justified in performing a serious surgical operation upon a patient with impaired kidney action if there is time to overcome such deficiency by the use of salt solution beforehand. The observance of this practice would probably reduce the mortality in our entire surgical work very close to one per cent.

While I have probably told you nothing new and nothing that you did not already know, if I have succeeded in impressing you with the observance of some points in practice that have seemed to me to be places which need mending and which will do most to lessen mortality, I will feel that the effort has not been in vain.

THE ETIOLOGY OF MELANCHOLIA.

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INASMUCH as post-mortem examination of the cortical cells of the brain taken from those who have died from melancholia has failed to throw any light whatever upon the pathological processes which underlie this form of mental alienation, any suggestion which may lead toward a solution of this problem should receive attention commensurate with the logic presented.

That the cortical cells, or, more correctly speaking, the psychical neurons, *viz.*, the pyramidal cells, the Golgi cells, the Cajal cells, the Martinotti cells, and the polymorphous cells are the agents which receive and interpret the distressing sensations cannot be denied. The question is, however, Is a diseased condition of these neurons the primary cause of the disorder, or do they in this disease functionate normally, correctly interpreting the sensations which are poured in upon them from nerves whose origin is outside the cerebrospinal axis? To assert the latter may at first thought seem as preposterous as it is bold, but a little careful scrutiny, I believe, will divest it of many of its apparent absurdities.

All must agree that the quality of a sensation is dependent upon the kind of stimulus which induces it, and that the sensation arises in consequence of the disturbance of the cortical cells of the cerebral hemispheres. The stimuli caused by the tickling of a feather and the stab of a knife on any specified point of the skin are received by the same set of psychical neurons, yet how differently are the two sensations interpreted! It must be admitted that in each instance the brain cells repond normally to the stimulus. Not because the knife-stab produces acute pain could it be said that the psychical neurons were acting disorderly. If a certain form of stimulus produces pleasure and another form produces pain, can it be asserted that the former represents a normal and the latter an abnormal activity of the cortical cells? If they act at all, they must, as far as they go, act normally. I do not mean to say that, if a single group of cells responds to a stimulus, all its related associates necessarily respond normally. What I mean is that if a group or cluster of cells responds at all to a stimulus, it can only respond in one way, the result of which gives rise to a sensation or a conscious state, and this, in itself, must necessarily be normal. The question of associated ideas is here left entirely out of account.

Now, if this be true, a patient may pass through a siege of melancholia from the moment of its inception until the time of his death without any pathological changes whatever having taken place in his psychical neurons. His mental apparatus might go on throughout the whole course of the disease correctly interpreting the sensations which overwhelm him.

From whence, then, emanate the stimuli which give rise to these painful sensations? The answer, I believe, is to be found in tissue metabolism. Melancholia is preeminently an emotional disease and the emotions arising therefrom are invariably of a painful character. Now, if it can be established that the metabolic process is answerable for the normal emotions, I believe we may have the foundation laid for the solution of the so-called abnormal emotions attendant upon melancholia. Let us, then, briefly study the cause of the emotions.

Every one is familiar with the fact that a direct relation exists between the vegetative functions and the manifestation of the emotions. Take, for instance, the drying up of the salivary secretion attendant upon a confused state of the mind; the inhibition of the lacteal function as a result of madness; the increased urinary secretion attending a state of expectancy; the sweating of perplexity, the tears of sorrow, the blush of shame, and the pallor of fear. These and many other like phenomena go to prove indubitably that the emotions and the metabolic process are intimately related. More than this, the evidence seems conclusive that the emotions are wholly dependent upon the vegetative functions.

The sympathetic nervous system presides over the organs of vegetative life. They consist of both motor and sensory neurons. They convey motor impulses to the tissues and transmit sensory stimuli back to their reflex arches and to the cerebrospinal centers. By this means the normal balance of metabolism is preserved. A surfeit of blood in an organ sets up a stimulus which, being conveyed centralward over the sensory sympathetic neurons, passes over the reflex arch which unites them with motor sympathetic neurons and back again to the tissues whence the stimuli originally arose. Such a stimulus has the effect of constricting the walls of the blood-vessels and so thereby diminishing the supply of blood to the part. On the other hand, an inadequate supply to the part produces a stimulus, but of an entirely different character; this stimulus, when reflected back to the walls of the blood-vessels, produces a dilatation of their walls and permits an extra supply of blood to be poured into the tissues. Both a constricting and dilating kind of stimulus passes over the same set of sympathetic neurons, just as a pleasing and a painful stimulus passes over the cerebrospinal neurons. It is the character of the stimulus and not the kind of neuron which produces the phenomena of dilatation or constriction of the walls of the blood-vessels. This is much more rational than the theory that the vasomotor sympathetic neurons are composed of two functionally different sets—vasoconstrictors and vasodilators, and that the former responds to only one kind of stimulus and the latter to another.

In the ordinary functioning of the sympathetic system these stimuli pass over the reflex arches and back to the tissues without falling upon the psychical apparatus, and, hence, no sensation arises in consequence therefrom. But if these sympathetic neurons be charged with a stimulus

beyond their capacity of reflecting over the reflex arches, the surplus must switch off to the cerebrospinal system and reach the psychical apparatus. Here this peculiar form of stimulus produces a sensation utterly different from that produced by stimuli carried in over the cerebrospinal system. It is of an entirely different character. The sensations incident to such an impulse we call an emotional feeling. Emotions arising primarily from the tissues are, however, pathological. The normal emotions have quite another origin. They follow as a result of intense impressions conveyed by the cerebrospinal sensory neurons to the psychical apparatus which, overflowing, pass out over the vasomotor sympathetic system to the tissues and there produce the metabolic effect, which upon being retransmitted back to the brain by the sensory sympathetic neurons is there translated as an emotional feeling. We assume that a stimulus which enhances the metabolic process gives rise to a pleasurable emotional state, while one that inhibits it produces an emotional feeling of distress.

Now, it follows with a directness that cannot be questioned that if, in tissue metamorphosis, *destructive* metabolism is not adequately balanced by *constructive* metabolism there must arise, in consequence, a stimulus identical with that produced in the normal state by an inhibited flow of blood to a part. That is, there must follow a painful emotional state. This, I infer, is the pathological condition which prevails in melancholia. Every symptom is indicative of disturbed metabolism; the slow heart, the coated tongue, the torpor of the secretory organs, insomnia, loss of motor energy, and general debility. It is noteworthy in this connection that patients suffering from melancholia have been previously enfeebled by a long-continued sickness, defective digestion, inadequate or improper food supply, bad hygienic environments or some of the forms of anemia. No matter what may constitute the primary causative factors, any condition which materially interferes with normal constructive metamorphosis is sufficient to set up the metabolic stimulus—the cry of the starving tissues for better nourishment.

But, it may be asked, if the psychical apparatus passes through unscathed, how are we to account for the terrible mental depression which is so pathognomonic of the disease, and how are we to explain the delusions which so often accompany it? The explanation of the mental depression is to be found in the fact that the patient's mind is wholly absorbed with the painful emotions which fill his bosom. If left to himself outside stimuli are incapable of finding their way into the precincts of his brain; he is so completely overwhelmed by the painful emotions emanating from the tissues of his body that his entire mentalization is concerned with this, and this alone. He can, however, be momentarily aroused from his state of misery, and it will be found that when his mind is diverted from his state of introspective wretchedness it is capable of reasoning logically and of arriving at correct conclusions. When again left to himself, however, his mind becomes completely swamped in the painful emotions which pervade it. The psychical cells are not at fault; they correctly interpret the sensations which are thrust with such awful force upon them. However, if the tide of painful stimuli be momentarily turned aside, they will be found to respond as readily to other forms of stimuli as they do to those of a painful emotional nature.

It need scarcely be remarked that the delusions of melancholia are only memory pictures which are recalled by the character of the incoming stimuli. As these latter are of a painful nature, so must the memories recalled necessarily be of the same character. The vividness of these pictures, like that of dreams, is occasioned by the fact that the mind being concentrated upon the one theme of misery, the psychical neurons not implicated in this mental process fall out of functional relation with each other, and a train of consecutive reasoning is utterly out of the question. Association of thoughts cannot be accomplished, so that when the neurons constituting a group, say in the auditory center, are by any means approximated, if the associated groups belonging to it are not also consecutively brought into functional relation so that a train of reasoning may be followed out, the impression will stand out as a bare auditory sensation, and a voice seems to whisper or shout into the ear.

The seat of the normal emotions appears to be located in the chest for the same reason that common sensory impressions are referred to the site at which the nerve is stimulated. The heart and lungs are the central bureau to which the whole economy appeals when in need of assistance; they, in consequence, stand the brunt of the whole metabolic process. The greater part of the stimuli which is translated into emotional feelings, therefore, emanate from these organs, and the sensation is, accordingly, referred to that locality. Victims of melancholia, if they are able to correctly interpret their feelings, refer the seat of their misery to the thorax. I have under my care at the present time an exceptionally intelligent lady who is suffering from this disease. She tells me that the source of all her trouble seems to be in her chest. Upon awakening in the morning, the first sensation she receives is an awful feeling of despair which seems to well up, like a specter, from her bosom.

The successful treatment of melancholia, while it is purely empirical, goes far to prove the validity of the theory here advocated. The only form of treatment which offers any hope of success is one tending to reestablish the normal balance between destructive and constructive metamorphosis—rest, tonics and good, assimilable, wholesome food are these agents and a careful study of the physiological balance sheet will point the way to the best way of accomplishing results.

MEDICAL PROGRESS.

The Fundus of the Eye in Kidney Disease.—The use of the ophthalmoscope in kidney disease is secondary in importance only to the examination of the urine, and the information obtained is frequently of far greater prognostic value than that gained in any other way. E. JACKSON (*N. Y. Med. Jour.*, July 27, 1901) says that of 419 cases reported by Belt seventy-two per cent. showing retinal changes due to nephritis were dead within one year and ninety per cent. within two years. A little practice will enable any physician to detect important changes. A brief mydriatic, such as cocaine or homatropine, one-fifth of one per cent., is usually needed. The changes are more marked around the macula or, at least, are more characteristic at that point. The veins are dilated and tortuous, other parts of the veins being frequently hidden in a swollen hazy retina. Next, hemorrhage may be found anywhere in the retina. Swelling and opacity of the retina are usually confined to patches. White spots arise from fatty degeneration and are most characteristic when arranged in rows radiating from the macula.

The Veldt and Natal Sores.—V. BISHOP HARMAN (*Lancet*, July 13, 1901) says that the Veldt sore is a vesicle forming in the stratum lucidum of the epidermis. Cultures from the serous discharge yield a most interesting diplococcus. It is distinctly thermophylic and extremely resistant, flourishing at a temperature of 110° C., dry heat, and developing luxuriantly after being soaked in a 1-1,000 bichloride solution. The sore is found only in the tablelands of South Africa. Twenty per cent. of the British troops were affected and, strangely enough, the mounted men suffered in twice the proportion to those on foot. It affected the Boers also, but not to the same extent as the British. The Natal sore differs in that it occurs only in swampy districts and affects the derma. Both in film and culture preparations it yields in every case a typical staphylococcus pyogenes aureus.

Septic Endocarditis.—H. LENHARTZ (*Münch. med. Woch.*, July 9, 1901) describes septic endocarditis as that form of valvular inflammation which is caused by specific pathogenic bacteria. The most important of these are staphylococci and streptococci, and, less frequently, pneumococci and gonococci. All cases may be roughly divided into two groups, (1) that in which the endocarditis is merely part of a general sepsis and (2) that in which its symptoms exceed in severity those of other lesions which may be present. The first group admits of a subdivision into two classes according to the vegetations forming delicate or voluminous masses. Auscultation will usually betray the latter condition, but may easily fail to reveal the former. Of 38 cases observed by the author 20 were male, 12 occurred between the twentieth and thirtieth year, and in 18 the mitral valve was affected. The disease lasted a period varying from four days to seven months. It is the more chronic cases which require special attention, since it is not generally known that septic endocarditis may run so protracted a course. In 12 of the cases, an old endocarditis was present, yet in 2 the acute process spared the chronically inflamed valve. Etiologically considered, 7 cases followed the introduction of catheters and bougie or other urethral manipulation, 5 cases developed during the puerperium, 4 after a gonorrhea, and 5 secondary to a croupous pneumonia. In 2 cases respectively an angina and a cholecystitis with pylephlebitis were looked upon as the cause. Twenty-eight cases were examined bacteriologically during life and after death with the following result: The staphylococcus was found 8 times, the pneumococcus 6 times, the streptococcus 10 times and the gonococcus once. Only one variety of germ was found in each individual case, and in the more chronic ones repeated blood-examinations disclosed the same germ, generally in increased numbers. Great stress is laid upon the value of the bacteriological examination, since by it alone can it be decided whether an endocarditis is septic or rheumatic, *i. e.*, dependent upon some germ which has as yet eluded detection, since all blood-examinations in these cases have been absolutely negative. The clinical picture of the more chronic forms in general is a uniform one; the disease rarely begins with a chill, but usually insidiously with a prodromal stage, with malaise and pain in the bones and joints. Anemia, cachectic appearance, cardiac murmurs, enlarged spleen and considerable fluctuations of temperature, with chills, develop when the malady has had a good start. The temperature is subject to considerable variation. Some patients never experience chills; in other cases they are of quotidian occurrence, and in still others they are entirely erratic in their appearance. Even with far-reaching destruction of the valves a murmur may not be apparent. The question as to whether there is a malignant rheumatic endocarditis, *i. e.*, an endocarditis with negative bacteriological findings and severe and fatal course, the author answers in the affirmative. In a general way streptococcus endocarditis gives an intermittent and staphylococcus endocarditis a more continuous temperature curve, while with pneumococcemia and gonococcemia an irregular, highly remittent and intermittent type prevails. The prognosis is serious, but not hopeless, and the problems which the treatment offers have not yet been solved despite the various sera.

A New Form of Narcosis.—B. KORFF (*Münch. med. Woch.*, July 16, 1901) has tried Schneiderlin's method in 80 cases as follows: At 7 o'clock in the morning the patient is allowed a fluid breakfast consisting of milk, tea or coffee. At 8:30 the first dose of scopolamin,

0.0004 gm., and morphine, 0.01 gm., is given. This is repeated at 10:30. If necessary, a third dose is administered at 12. One hour after the second or third dose, the operation is begun, sometimes with the aid of a few drops of chloroform. The method on the whole gives satisfaction in adults, children and the aged, and is only rarely followed by untoward symptoms.

Home Treatment of Tuberculosis.—As soon as the diagnosis of pulmonary tuberculosis is made it is now generally considered necessary that the patient should go to the mountains. In many instances this is impossible and is certainly a great hardship to a large number. I. H. HANCE (*N. Y. Med. Jour.*, Aug. 10, 1901) insists that by careful attention to the three fundamental needs of the patient, fresh air, good food and rest, many modern homes can be used successfully as places for treatment for tuberculosis. Fresh air is required every day and every night, the more the better. At least one window should be open the year around. For summer, tent life night and day is the ideal one. Minute directions must be given in regard to the regulation of fresh air. Overfeeding is the principle to act upon in all cases, whether feverish or not, whether incipient or advanced. Rest should be absolute in all febrile cases and fatigue should always be avoided. Exercise should be under the control of the physician and carefully watched. The wearing of proper clothing and hydrotherapy are very important adjuncts in the treatment. The necessity for climatic changes is thus frequently and successfully avoided.

Injections of Iodo-Mercuric Cacodylate in Syphilis.—The effects of hypodermic injections of this preparation have been studied in 31 cases of secondary and tertiary syphilis by L. BROCQ, CIVATTE and FRAISSE (*La Presse Méd.*, July 17, 1901). Treatment was commenced by daily doses of ½ grain, and when necessary the dose was doubled. The needle was thrust perpendicularly into the buttocks, giving in reality an intramuscular injection. Grave and rebellious cases were selected, most of which had resisted other forms of mercurial treatment. Satisfactory results were obtained in twenty-four cases. Important failures occurred, notably, in cases of grouped papulo-squamous syphilides. The treatment is said to be contra-indicated in the following cases: (1) Predisposition to pigmentation of the skin; (2) in tuberculous patients having a tendency to pulmonary congestion or hemoptysis; (3) where gastro-intestinal disturbance occurs. Among the advantages of iodo-mercuric cacodylate, the following are stated: (1) It may be prepared in aqueous solution, sterilizable without danger of decomposition, and miscible, without precipitation, with blood-plasma; (2) subcutaneous administration of such solution produces little or no pain and no abscess; (3) excellent results are obtained in cases of pronounced syphilitic malnutrition, emaciation and neurasthenia, in cases of rebellious mucous patches and ulcers, in the presence of seborrheic complications, and in most cases of tertiary syphilis.

Test for Lactic Acid.—The presence of lactic acid in the stomach contents is very suggestive of carcinoma when a test meal has been given. An easy and reliable method of testing for this acid is given by M. I. KNAPP (*N. Y. Med. Jour.*, Aug. 10, 1901). A weak solution (1 to 2,000) of ferric chloride and some ether are required. To one cubic centimeter of filtered gastric juice five centimeters of ether are added, shaken and allowed to stand. To a few centimeters of the iron solution, which is practically colorless, are added several drops of the ether extract, and if lactic acid is present a canary-yellow color will result.

Sclerogenic Treatment of Cancer.—The history of a case of cancer of the breast treated by injections of a 5-per-cent. solution of zinc chloride is related by P. COUDRAY (*Jour. de Med. de Paris*, July 21, 1901). The first injection was made in November, 1891, a second in March, 1892. At these times the solution was injected not only into the breast itself, but into and about the axillary lymph-nodes, which were enlarged. Five years later the breast was atrophied, presenting a vague nodule surrounded by adipose tissue. Nine years after the primary injection there was still no return of the tumor. During the past few months a recurrence has been noted; there is now present a scirrhous growth, adherent to the skin, showing a tendency to ulceration, and accompanied by enlarged axillary nodes. Coudray believes that the growth of cancer may sometimes be arrested for a long period by sclerogenic treatment, and that this arrest is due to the obliteration of lymphatic spaces and vessels.

Propagation of Yellow Fever.—Probably the most valuable contribution to the science of medicine during the past year is the conclusive proof that yellow fever is transmitted from one patient to another by means of the mosquito. Formerly the chief means of communication was thought to be through fomites. J. C. Nott in 1848 was the first to suggest that an intermediate host was necessary to the spread of yellow fever. Full credit for the mosquito theory must be given, however, to C. J. Finlay, although positive results could not be obtained by him. During the past year W. REED (*Fed. Rec.*, Aug. 10, 1901) of the United States Army has conducted a series of most valuable experiments and the results are most reliable and conclusive. At Camp Lazaer, near Quemados, Cuba, one building was erected in which a large quantity of fomites from fatal cases of yellow fever were placed and several persons compelled to remain in the building, which was poorly ventilated, for several weeks without developing any symptoms of disease. Another building was erected, sanitarily clean in every way, surrounded by fine netting and divided into two parts by fine netting also. In one part several *Culex* mosquitoes were placed after they had bitten yellow fever patients and in the other non-immune persons were quarantined. None of these people developed any disease in the

non-infected apartment. The men were then exposed to the mosquitoes, but no results were at first obtained, probably on account of the short interval elapsing from the time of contamination of the mosquito to the day of inoculation. The first positive result was obtained upon a volunteer who was bitten by five mosquitoes which had been previously contaminated, as follows, two fifteen days; one nineteen days, and two twenty-one days. Three days and nine and one-half hours afterward he developed a well-marked case of yellow fever. Several other men were similarly inoculated during the next few weeks and all but two had attacks of yellow fever, beginning from three to five days after being bitten. An important point was settled by experiment with another brave volunteer who was bitten by fourteen mosquitoes on the fourth day after they had become contaminated. The result was negative. He was again bitten on the eleventh day without effect. On the seventeenth day after their contamination he was again exposed to the mosquitoes and on the fourth day thereafter developed a severe attack. Other patients were inoculated by bites from these mosquitoes on their fifty-first and fifty-seventh day of contamination thus showing the length of time during which their bites are dangerous. Four patients were also inoculated by subcutaneous injections of blood taken from those suffering from yellow fever.

Carbon-Disulphide Poisoning in India Rubber Workers.—Two laborers, whose work exposed them to the vapors rising from a vat containing carbon disulphide used in vulcanizing rubber, presented themselves to E. MENDEL (*Berl. klin. Woch.*, July 29, 1901) with symptoms of extreme muscular weakness in forearms, hands and legs. Examination showed muscular atrophy in the distribution of the median, ulnar and radial nerves with partial reaction of degeneration. The absence of tenderness along the course of the peripheral nerves and the lack of disturbances of sensation excluded a neuritis. The clinical picture corresponded more closely with disease of the anterior cornua of the spinal cord. It has been experimentally shown, however, that carbon disulphide is capable of producing disease of almost all parts of the nervous system, and its etiological significance must be remembered in the diagnosis and treatment of nervous disorders in individuals exposed to its action.

Cause and Treatment of Gout.—The theories in regard to the cause of gout are constantly becoming more numerous and many of them are extremely unsatisfactory and unreasonable. The idea of auto-intoxication is offered as a starting-point of so many diseases at present and the intestinal tract has very properly been held responsible for numerous derangements and constitutional diseases. W. R. GORE (*Indian Med. Rec.*, July 10, 1901) believes that gout is not due to the presence of uric acid in the blood, but that the symptoms result from the presence of a toxin which is formed by one of the intestinal bacilli on an intestinal secretion specifically altered by the diet. The object of the treatment, therefore, consists of the selection of a proper diet which will be quickly digested, the refusal of alcohol in any form during treatment and careful attention to the condition of the bowels. The action of two drugs, colchicum and lead, which seem to have a specific influence upon the disease is offered to confirm the theory. Colchicum acts by increasing the secretion of the intestines and may cause some change in the constituents of the secretion. Lead causes a contraction of the blood-vessels of the intestine, decreasing intestinal secretion and favoring gout. The author believes that when gout is treated as due to a toxin caused by intestinal derangement the results are much better than when treated in any other way.

Tabes Dorsalis in Women.—In a series of cases of locomotor ataxia observed by P. FEHRER (*Berl. klin. Woch.*, July 29, 1901) the initial symptoms were as follows: Lancinating pains, 13 cases; weakness in legs and back, 10 cases; headache or dizziness, 8 cases; paresthesia, 6 cases; loss of visual power or diplopia, 5 cases; gastric crises, 5 cases. During treatment the symptoms occurring were, in the order of frequency, disturbances of sensation (92 per cent.), lancinating pains (85 per cent.), loss of patellar reflex (83 per cent.), Argyll-Robertson pupil (76 per cent.), Romberg symptom (71 per cent.), ataxia (55 per cent.), disturbance of bladder and rectum (50 per cent.), gastric crises, inequality of pupils, paresthesia, headache, vertigo, girdle sensation, weakness of extremities, ocular paralyses, optic-nerve atrophy, cardiac neuroses, psychical disturbance, diplopia, laryngeal crises. In the treatment of these cases, antisyphilitic remedies and silver nitrate were practically without result. Amelioration of symptoms was obtained in one-half the cases by exercise and regimen.

A Case of Latent Renal Lithiasis.—A patient of sedentary habits, whose previous history included nothing of interest beyond occasional vague lumbar pains, became suddenly ill, complaining of general lassitude and headache. Physical examination was negative. The urine gave a very faint reaction to the cold nitric-acid test for albumin. There were no definite symptoms of nephritis. Three days later intense lumbar pain developed, with frequent desire to urinate; the lumbar pains persisted. At the end of a week respiratory difficulty, increased rapidity of pulse and galop-rhythm were present. During the night a syncopal attack developed at stool. Slight pyrexia, obscuration of the visual field, cramp-like pains in the legs, intense frontal headache, feeble, rapid pulse, increasing albuminuria, all followed in rapid succession. Sudden death occurred on the ninth day. More than 500 calcium-oxalate calculi were found at the autopsy by DESSIRER and LEGRAND (*La Méd. Moderne*, July 17, 1901). The pelvis, calices and collecting tubules of both kidneys were filled with these concretions. The kidneys themselves had suffered from marked sclerosis.

Cholelithiasis as a Cause of Gastric Disease.—Among 102 cases of benign gastric disease treated surgically in the Heidelberg clinic 12 cases were regarded by PETERSON (*Wiener klin. Rund.*, July 21, 1901) as positively and 5 cases probably due to cholelithiasis. The symptoms were caused by pressure of the enlarged and stone-filled gall-bladder on the duodenum, by injury of the duodenum by a perforating calculus, by pericholecystitis with or without perigastritis, or by the pressure of a large stone situated in either the cystic or common duct. These produced compression or twisting of the duodenum, cicatricial contraction, and band-like adhesions. The classic symptom is stenosis of the pylorus or duodenum; gastralgia occurs at times. Perforation or thrombosis may cause hematemesis. Obstruction may be followed by a loss of free hydrochloric acid and the appearance of lactic acid; the diagnosis of carcinoma is often made. The secondary gastric changes may demand gastroenterostomy. In any event it is essential to break up adhesions, to remove accumulations of gallstones, and to provide a free passage for hepatic secretions.

Pneumobacillus and Purulent Cerebrospinal Meningitis.—Up to the present time this bacillus has been found in only a few cases of purulent cerebrospinal meningitis. K. JASSNIGER (*Ctblt. f. Bäk.*, July 12, 1901) cites a case occurring in a patient, sixteen years of age, who was suddenly taken ill with chills followed by a perminent rise of temperature to over 101° F. There were present uncontrollable vomiting, intense headache, general muscular pains, profuse perspiration, irregularly contracted pupils and incontinuance of urine and feces. Coma supervened and death took place on the seventh day. The clinical diagnosis was cerebrospinal meningitis and upon autopsy the characteristic pathological lesions were found. A cover-slip preparation of the meningeal pus stained by methylene blue showed both intra- and extra-cellularly a short, round bacillus, sometimes occurring in pairs. The twenty-four-hour bouillon growth showed a general diffused clouding with pellicle formation. Agar cultures showed a white surface growth and gelatin plates small, round, opaque colonies. Stab cultures in gelatin after forty-eight hours' growth showed a typical development along the line of inoculation. No coagulation was produced in milk. Glucose was fermented. Gram's strain was not retained. The organism was pathogenic for mice in twenty-four hours by intraperitoneal inoculation, capsule bacilli being obtained from their heart's blood. He therefore regards the organism found as identical with Friedländer's pneumobacillus.

Action of Alcohol on the Heart.—New researches are contributed by L. HASKOVEC (*Arch. de Med Experimentale*, July, 1901) who has pursued experimental investigations along this line upon dogs. Small doses (5 c.c. of a solution of 7 parts of alcohol to 25 of water) produced upon intravenous injection a distinct rise in the blood-pressure lasting from six to eight seconds and in some cases even longer. The same result is observed when one has poisoned the peripheral vagus nerve with atropine. Hence he thinks that alcohol acts directly upon the heart, in small doses causing it to produce more work. In such doses it is a stimulant. The greatest increase in the number of pulsations is met with in the state of chronic alcoholic poisoning, probably due to the increased muscular activity and general physical condition produced.

Anthrax; a New Mode for Its Distribution.—There is every reason to suppose that if anthrax is gaining such a foothold in Scotland as one would be led to believe from a discussion of a number of cases by ALEXANDER SCOTT (*Brit. Med. Jour.*, July 20, 1901) there is a good prospect that the general practitioners will come in contact with cases sooner or later. As would be expected, all those cited in this paper occurred among the ill-nourished workers in horse hair. The British veterinary regulations are so efficient as to have secured a total immunity from anthrax to these operations. Very recently, however, due to the importations of Chinese, Siberian and Russion hair, anthrax has broken out in almost epidemic form in the neighborhood of Glasgow. The diagnosis of these cases has in a number of instances proved difficult and has been sadly delayed by the fact that many of them have been on the gastric or pulmonic form in which the symptoms are closely marked and are at best subjective. It is a curious fact that in these varieties of the malady, no large development of the organism takes place in the blood till just before or just after death. The prevention of this disease is not, according to this report, as easy as it might seem. It is ably considered under the following three heads: (1) The dust; the germs are more easily disseminated in the dry state, hence it is of paramount importance that the hairs be kept as wet as possible. (2) The germs; with the vegetative form there is no difficulty, since a temperature of 50° C. for ten minutes destroys it; the spore, however, is next door to salamandoid in its relation to heat; indeed, there is no known process by which it can be destroyed when contaminating hair without the use of agents which work serious damage to the host. The excessive steam pressure necessary to kill the spores cause each hair to curl up at the ends and become utterly inelastic and useless. (3) All hair should, however, be boiled for thirty minutes. If this be done in a two-per-cent. solution of potassium permanganate and if the hair be subsequently bleached by a three-per-cent. solution of sulphurous acid, the author feels that a great deal can be done toward rendering this lithal Asiatic hair harmless. The crying need for immediate action is self-evident. Suppose even that spore-bearing hair finds its way into cushions without infecting any body at the primary handling, there is no reason to believe that they may not kill the innocent who shakes them loose ten to twenty years later.

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DUST AND CHILDREN'S SUMMER DIARRHEAS.

THE summer death-rate in children is always highest, not during the first hot spell when adults as a rule suffer the most, but later in the season after the heat has weakened resistive vitality, so that the end of the month of August usually furnishes the worst statistics in infant mortality. It is well known how sensitive to even slightly noxious agents are the delicate intestinal tracts of infants who have had an attack of gastro-intestinal disturbance early in the summer. If such children are to be saved from the dangers of the summer later on the most careful precautions must be exercised with regard to the admission of even the slightest amount of infectious material into their digestive tracts. It is to be supposed that proper safeguards are taken with regard to their food and drink. Water that may be perfectly innocuous for adults or even children of a larger growth may well contain non-specific germs that will affect the sensitive stomach and bowels of delicate infants. No matter how healthful the water of a locality, it should always be boiled for young children and should not be allowed to stand in open vessels before being used. This precaution is all the more important if, as so often happens, families are not at home for the summer, but are using water the condition of which they know nothing.

Digestive disturbances in children are usually due to crude imperfections in diet or easily recognizable violations of sanitary regulations. Not infrequently, however, it is impossible to determine what has been the active agent in the production of diarrheic disease in a given case. Under these circumstances there is a growing tendency to consider that dust and its attendant dangers have had something to do with the production of the affection. The exposure of food materials destined for children to the chances of dust infection, especially after their preparation is complete, is of course wanton negligence. There are other risks, however, that are not so readily recognized. The use of dusty drinking utensils would be unpardonable, but the danger of contamination of the child's hands and person and the conveyance of infectious material to the mouth in this way has not been generally sufficiently considered. It may seem far-fetched and finical to take serious account of a so apparently trivial source of infection, but infantile health is dependent on the minutest precautions. The triviality of the cause at work will not be insisted on by those who remember how soon and how seriously lead-workers who fail to be cleanly are affected by their occupation. Clean hands mean for workmen, who are not extremely susceptible to the influence of lead, comparative freedom from the symptoms of plumbism. In this case there is question, not of extremely active living toxic principles, but of the gradual accumulation of a comparatively inert metallic substance. The patient in one case is a healthy adult, in the other a delicate child, so that the question of clean hands can be readily understood to be of very serious importance.

Perhaps in nothing has Christian science deservedly incurred more blame than in its treatment of the ailments of children. Sanitary regulations, the value of which has been learned only by costly experience in infant mortality, are calmly set aside because they are a recognition of the existence of evil in the world. The recent declaration of a healer on this subject seems worth quoting, because it emphasizes by contradiction the measures that are most necessary for the preservation of infantile health during the summer weather. "The condition of the stomach or bowels," she said, "and its food and clothing are of no serious moment to your child. The daily ablution of an infant is not more natural or necessary than to take a fresh fish out of

water and cover it with sand once a day that it may thrive better in its natural element." This represents the very acme of delusional absurdity. Such an opinion makes still more striking a recent expression with regard to Christian scientists by a writer in the *North American Review*. He says that the adherents of Eddyism illustrate better than ever before in history "how near the verge of insanity persons may wander and still retain financial ability."

After the care of the child's food the most scrupulous care for its personal cleanliness constitutes the best safeguard against the development of gastro-intestinal disturbance. After every outing and before every feeding the infant's hands and face should be cleansed conscientiously. The dangers of contamination by dust particles that cling to the hands and face to find their way eventually into the mouth are by no means so negligible as might be imagined. In the course of prophylactic progress that has become so marked a feature of medical advance in recent years this factor in pathogenesis must be taken into account if we are to continue our reduction of infantile summer mortality and not merely be satisfied with what has been accomplished.

FREE PUBLIC BATHS.

READING in the head-lines of one of the recent daily papers, "New Jersey Farmers Get Their Yearly Bath," one may be inclined at first sight to yield the smile which the writer hoped to win. A second look shows that the article merely recounts the celebration of the annual "Big Salt Water Day" by the farmers near the New Jersey coast and their antics upon the occasion. There was no apparent intention of aspersing the customs of the Jerseymen.

Coming nearer home the suggestion of a yearly bath is one savoring less of wit than of pathos. Who that has ministered to the inmates of the city's tenements has failed to find an explanation of their apparent antipathy to water if he has entered their homes? If the tenement is one of a higher grade an iron sink is found in each apartment; if of the lower class, one is placed in each hall for the two or four families occupying the floor. And this is what is provided to encourage that cleanliness which is said to be next to godliness and which goes so far in the prevention of disease! With a large family packed in a few small rooms it is little wonder that ablutions are confined to the face and hands. Ventilation the owners of tenements can and must provide, but plumbing is expensive, and the installation of baths would place the cost of the poorer grades of tenements out of the reach of those whose limited means force their occupation of this class of dwelling.

The provision of bathing facilities in these houses themselves being obviously beyond the limit of what may reasonably be expected, public baths are the natural solution of the difficulty. The recommendation of Commissioner Kearney that the city construct eleven public bath-houses, five of them to be placed in Manhattan, is a step in the right direction and deserves the support of every physician. There are, of course, some of the more newly-acquired citizens of this growing land of freedom who have an inherited fear of ablutions, but with facilities at their command it is likely that although the present generation may be hopelessly grounded in its dread of water, the characteristic might be eliminated in the next. No stronger sign of the appreciation of the public can be needed than the weekly attendance at the Rivington Street Public Bath, which is set down by Mr. Kearney as thirty thousand.

INTERMEDIATE TYPES OF DISEASE.

LONG ago in the columns of the *Century* Uncle Esek said very well, "It is not so much the ignorance of mankind that makes them ridiculous as the knowing so many things that ain't so." The expression sums up in a few pregnant words a very prevalent state of the human mind of which the physician has especially to be careful. Most of the medical practitioners of every generation have been perfectly "cock sure" of a number of things that the next generation of physicians (and surgeons) have learned to look on as absurd. It would be almost childishly naive to hope that our generation is to be saved from the pitfalls of false opinion, and so we may be sure that at least a certain number of our present-day cherished ideas will loom up before we shuffle off this mortal coil as the not easily explicable errors of deficient knowledge.

Our dogmatism is manifest in this present generation in nothing more than in the labeling of disease types. We call a disease rheumatism and then seem to think that we have definitely classified it. We call a condition cirrhosis of the liver and are apt to feel that that ends the matter. There are hopeful signs, however, of growing dissatisfaction with accepted types of disease. From many sides we are learning what manifold conditions may be included under the term rheu-

matic. Not only are there variants according to the acuity or chronicity of the disease, but also in the cause of the underlying pathological condition. A very helpful book has been recently written on "Some Cirrhoses of the Liver" in which the author frankly admits our ignorance of the various forms of sclerotic disease of the hepatic gland, while making clear that their name is probably legion.

Perhaps in no department of nosology are we less ready to admit the possibility of further development in differential diagnosis than in the acute exanthematous diseases. There is a universal and very definite impression that, at least in the matter of eruptive disease, medical diagnosis has attained precise and unalterable limits. Recent investigations, however, go far to disturb this apparent finality. Within the last ten years the medical world generally has come to admit the existence of an independent type of exanthematous disease in what is known as German measles, though why the adjective German should be employed rather than any other national epithet is not very clear. Last year an English physician described an epidemic of "a fourth disease," that is to say, he found that under the term "rubella" or German measles two diseases were confounded, neither of them identical with scarlet fever or measles. This observation needs substantiation by other investigators, but it serves to show very well the spirit of the times and the encouraging skepticism as to the absoluteness of present-day types of disease.

As a matter of fact it would not be surprising if there were many more distinct exanthemata than those now recognized. It is a subject for wonder that the skin should react with such characteristic difference to what are, after all, very similar irritants, but, since it does react differently, the limit of its variability under conditions of irritation is hard to set. There are said to be some eleven different kinds of nut-galls produced by the sting of insects in this country alone. Each form of gall is produced only by one special kind of insect and the cells of the tree react differently to each ovipositor. The more highly specialized cells of the human skin might well be expected to give many types of eruption as a consequence of specific irritants.

That we have not as yet all the important exanthemata finally classified seems sure. One of the largest and most important groups of exanthematic infectious fever is embraced under the term smallpox. There is a growing impression that there is included under this head more than one type of disease. Many believe that there is an intermediate disease between varicella and variola. Some examples of this type of disease, for which vaccination proved no protection and immediately after which vaccination was successfully performed, were described at the sessions of the American Medical Association last year. It remains to be seen whether such an intermediate type of disease does not really exist. Some excellent opportunities are just now afforded students of smallpox here in the East for the detailed study of the disease. Let us hope that the chances provided will not be missed and that the present epidemic will at least bring us definite knowledge on these disputed points.

ECHOES AND NEWS.

NEW YORK.

Modified Smallpox Epidemic.—Middletown, N. Y., is suffering from a mild epidemic of modified smallpox or an intermediate disease between this and chicken-pox.

Navy Yard Garbage Washes on the Beaches.—Many complaints have recently been made regarding the pollution of the shores of Bay Ridge and contiguous territory with garbage. Investigation has shown that the Government scows which carry refuse from the Navy Yard contribute more than their share to this nuisance. Formerly the refuse of the yard was burned in the crematory, but for some unknown reason this has been discontinued.

Vaccinators Reinstated.—The Health Department has reinstated the forty extra medical inspectors who were employed to vaccinate school children and who were suspended two weeks ago because the Civil Service Commission declared that they were not entitled to the pay they were drawing. The men were simply hired from month to month and received $100 per month each as salary. The Civil Service Commission declared that the men were entitled to but $600 per annum and to receive $1,200 a year without competitive examination was a violation of Rule 37 of the Civil Service rules, and the Health Department was forced to dismiss the additional vaccinators. Rule 37 is: "An increase in salary or other compensation of any person holding an office or position within the scope of these rules beyond the limit fixed for the grade in which such office or position is classified, shall be deemed a promotion."

Results of Dr. Doty's Mosquito Campaign.—Dr. Dotv has issued a report on his experiments in mosquito destruction at Concord, Staten Island. After referring to experiments in various parts of the world which proved that

the malarial parasite was transmitted from one person to another by the female of the *Anopheles* species of mosquito, the Health Officer of the Port says that he found at least 30 per cent. of the inhabitants of Concord suffering from either acute or chronic malaria. "In almost every house or yard were found typical breeding-places for mosquitoes," he writes, "either in the shape of used or unused rain barrels, cisterns, cesspools, or abandoned receptacles thrown about the premises. Samples of water from these, as well as all stagnant pools, were examined, and the larvæ found. In some instances, particularly in receptacles about the house, the water was actually alive with them." Of twenty-seven mosquitoes taken from a bedroom, more than one-half were malarial insects. The stagnant pools in the Concord district and the weeds surrounding them were treated with oil and relief was felt by the inhabitants. Dr. Doty concludes that the use of petroleum as advised by experts bears out the claims made by them.

PHILADELPHIA.

Statue of "The Medicine Man."—The bronze equestrian statue of "The Medicine Man," by Cyrus E. Dallin, has arrived from Paris and been formally accepted by the Fairmount Park Commissioners. The Austrian Government had authorized its purchase for Vienna before it was known that Philadelphia had secured the statue. It will be mounted on the summit of Strawberry Hill, Fairmount Park.

Insane Asylums Overcrowded.—The institutions which suffer the most by Governor Stone's reduction of appropriations are probably the State insane asylums. The asylum at Harrisburg is most in need of improvement, the State Board of Charities asking for an appropriation of $498,000 for two years. This was cut by the Legislature to $256,000 and the Governor further reduced it to $136,000. The capacity of the buildings is about 700 and there are now 879 inmates. The result of the cut in appropriations means that many of the additional insane for the next two years will be sent to county homes and detained as paupers with pauper care.

Smallpox Hospital Looted.—The smallpox hospital at Gloucester, N. J., was recently robbed of the beds, bedding, chinaware, supplies, etc.

Resignation of Dr. Taylor.—Dr. J. Madison Taylor, for fifteen years professor of diseases of children in the Philadelphia Polyclinic, has tendered his resignation.

Deaths from Gasoline Explosions.—The explosion of gasoline August 5th which wrecked five houses, caused the death of eight people, and seriously injured a dozen more, has caused unusual activity among the city officials in searching for other places where that material is illegally stored. A special license must be owned if more than one gallon is kept. The insurance patrol records show that since 1895 there have been 120 explosions from gasoline in some of its forms.

Large Bequests to Charities.—The will of Emily Phillips, who died July 24th, leaves a large portion of the estate of $400,000 to charitable institutions. Among the bequests are Jefferson Hospital, $10,000; Jewish Hospital, $40,000; Pennsylvania Hospital, $4,000. The Presbyterian Hospital receives $2,000 and the Medico-Chirurgical and Howard Hospitals $1,000 each.

Typhoid Fever Again Prevalent.—For the week ending August 10th there were reported 117 cases of typhoid fever, an increase of 25 over the preceding week. Until the latter part of July the present year showed a much smaller number of typhoid cases than during the epidemic of 1899. Of late the records about equal those of two years ago, although a repetition of that epidemic is not feared at present.

University of Pennsylvania.—Dr. C. J. Essig has resigned the professorship of mechanical dentistry and metallurgy in the Dental Department of which he was the founder in 1897 and its first Dean. Under his management it became the most successful department, financially, in the University.

CHICAGO.

College of Physicians and Surgeons, Chicago.—This institution has recovered from the effects of its recent fire and is now in excellent running order for the fall term.

Infant Mortality Reduced.—Infant mortality has been so reduced and sanitary conditions have been so improved as a result of the labors of the volunteer medical inspectors that Dr. John R. Neeley has decided to issue a call for fifty more physicians and nurses. When the new volunteers enlist the inspection, instead of being confined to the Ghetto and other crowded tenement districts, will take in other parts of the city where insanitary conditions may be ameliorated.

Graduate Nurses Organize.—The work of organization in the Graduate Nurses' Association of Illinois has been completed. A constitution has been adopted and steps taken for the incorporation of the Association. The object of the organization is to secure State recognition for trained nurses in the same manner that physicians and pharmacists are legalized.

Need of Isolation Hospitals in Chicago.—Dr. Heman Spalding, Chief Medical Inspector of the Health Department, discusses this subject in a recent issue of the *Chicago Tribune*. Among other things he says: "Chicago has a well-equipped isolation hospital for smallpox of which every citizen may be proud, but the city has long needed isolation hospitals for diphtheria, scarlet fever, measles, whooping-cough, and tuberculosis. These isolation hospitals are necessary for those who have no

means at home for the proper care and precautionary measures necessary to prevent the spread of contagion. Almost daily scarlet fever and diphtheria are found in families where other members of the family have no escape from disease. An example of the efficacy of the removal and isolation of persons suffering with a communicable disease is found in our experience here in Chicago in suppressing smallpox. During the recent outbreak of smallpox throughout the country many persons afflicted with the disease in all its stages have come to the city from various States and mingled with others before their presence was known to the Health Department. The prompt removal to the hospital of all persons afflicted with smallpox has enabled the Department to keep the disease from gaining a permanent foothold in Chicago. The other infectious diseases could be stamped out with even less difficulty if the same methods used for smallpox were pursued in cases where safety could not be secured in the home. Is there not some way to secure isolation hospitals for epidemic contagious diseases not now provided for? The city should build and own them, but the money is not in sight. The millionaire philanthropist sees more attractive fields in aiding those who are not helpless by endowing colleges and fitting up libraries. If the Chicago University will build these hospitals in connection with the medical department of the Rush Medical College, it will be a stroke of wisdom furnishing unlimited rare clinical material for teaching. Such a hospital could be made self-supporting, as many able to pay would seek isolation and treatment there. It would be a place where the stricken hotel guest could go, when to remain would be a source of danger to others and the cause of financial loss to the landlord."

Chicago Eye, Ear, Nose and Throat College.—This institution, which recently moved into its new building, offers to practitioners of medicine the very best facilities for acquiring proficiency in physical examination, diagnosis and treatment of diseases in these very important departments of medicine. The college is located at 206 East Washington Street. Instruction is both clinical and practical. The college is thoroughly equipped in every respect, particularly in the way of instruments and apparatus, which are as essential as a fine building. It has a limited number of free beds and operations, board and nursing are furnished. These beds are much in demand and often booked in advance.

Transfer of Preclinical Work of Rush Medical College to the University of Chicago.—It is believed that this transfer marks a distinct step forward in medical education in this city. This combination, more intimate and satisfactory than has hitherto existed between the interests of the University, will prove to be of incalculable benefit to both. The present transfer, it is hoped by many, represents only a partial realization of the possibilities of combination which the common interests of Rush Medical College and the University of Chicago suggest. Conditions are changing with the times, and the factors which prevented the close proximity of hospital and university in large cities are rapidly disappearing; indeed, they may be said no longer to exist.

New Clinical Amphitheater.—At the Mercy Hospital a magnificent surgical and clinical amphitheater is in process of erection; it will cost $25,000. Its seating capacity will be 400, and no seat is over nine rows from the operator. Tile, marble, glass and every modern arrangement will be employed to make the surgical schoolroom a model of its kind. The expense is being met very largely by the Northwestern University Medical School and its use will be confined to the Faculty of this school.

Internes Forbidden to Perform Operations at the Cook County Hospital.—Internes at the County Hospital are henceforth barred from performing major operations. Warden Healy has issued the most stringent order ever posted in the operating-rooms of the hospital. This order went into effect August 5th and reads as follows: "Under no circumstances shall any interne be allowed to perform a major operation or high forceps delivery, either with or without the presence of the attending surgeon. In any case of emergency the house physician or surgeon shall secure the immediate attendance of the attending physician or surgeon. This rule covers all operations where it becomes necessary to place patients under anesthetics. Any violation of this rule will subject the offender to immediate suspension from the hospital force." In consequence of this rule internes are up in arms against the Warden. They protest that they are at the hospital for the experience they gain in the operations there performed, and that without the chance to operate they learn very little. But Mr. Healy will not change the order nor in any way modify it. For a number of years it was the rule that all major operations must be performed by the staff surgeons, and internes were not permitted to do the work. This rule was not rigidly adhered to, with the result that many operations were done by the internes themselves, and the number of these operations kept increasing with unsatisfactory results.

GENERAL.

American Veterinary Medical Association.—The thirty-eighth annual meeting will meet at the Hotel Rudolf, Atlantic City, N. J., September 3, 4, 5 and 6, 1901.

Canadian Medical Association.—The thirty-fourth annual meeting of this Association will take place at Winnipeg, Manitoba, August 28-31, 1901. An interesting program is promised.

Mississippi Valley Medical Association.—The next annual meeting of this Association, to meet at Put-in-Bay, offers the following program: Address in Medicine, by Frank Billings, Chicago; Address in Surgery, by Reginald H. Sayre, New York City; Address of President, A. H. Cordier, Kansas City, Mo.; Pathological Cause of the Eruption in the Exanthemata, by J. M. Postle, Hinckley, Ill.; Acute Intestinal Auto-infection, by John M. Batten, Downingstown, Pa.; Surgery of the Palate, with Stereopticon Exhibit, by Truman W. Brophy, Chicago, Ill.; Some New Remedial Agents in the Treatment of Gynecological Affections, by Chauncey D. Palmer, Avondale, Cincinnati, O.; Surgical Treatment of Pulmonary Abscess, by D. N. Eisendrath, Chicago, Ill.; The Severing of the Vas Deferens and Its Relation to Neuro-Psycopathic Constitution, by H. C. Sharp, Jeffersonville, Ind.; Varicose Veins and Their Treatment, by J. Lively Johnson,, Louisville, Ky.; Subdural Hematoma from Pachymeningitis Hemorrhagica Interna, by Charles J. Aldrich, Cleveland, O.; Some Obscure Injuries Which Follow the First Toxic Action of Alcohol, by T. D. Crothers, Hartford, Conn.; Sterilization of Rubber Gloves, Catheters, etc., by Formaldehyd Gas; Correct and Erroneous Culture Tests, by A. Goldspohn, Chicago, Ill.; Auto-intoxication and Its Treatment, by Chas H. Shepard, Brooklyn, N. Y.; Aboriginal American (Indian) Contribution to Therapeutics, by B. T. Whitmore, New York City; The Bed-treatment of the Insane, by Frank Parsons Norbury, Jacksonville, Ill.; The Clinical Diagnosis of Carcinoma of the Esophagus and the Technic of Gastrostomy, by Charles G. Cumston, Boston; Clinical Notes on Gleet, by A. Ravogli, Cincinnati, O.; Dentists' Neck, a Hitherto Undescribed Neurosis, by Albert E. Sterne, Indianapolis, Ind.; The Value of Mechanical Appliances in the Aid of Intestinal Suture, by Edward H. Lee, Chicago, Ill.; A Discussion of the Morbid Conditions of the Upper Respiratory Tract Resulting from the Infectious Diseases, by Colus M. Cobb, Boston, Mass.; Congenital Valvular Obstipation, by Thos. Chas. Martin, Cleveland, O.; Features Determining Permanency of Cure in Radical Operations for Hernia, by A. J. Ochsner, Chicago; Science and Christian Science, Their Claims and Miracles, by Paul Paquin, Asheville, N. C.; Gastric Lavage, Its Uses and Abuses, by Thos. Hunt Stucky, Louisville, Ky.; Some Causes of Ignored Syphilis and Their Remedies; Clinical Examples Demonstrated from Lantern Slide Reproductions, by M. L. Heidingsfeld, Cincinnati, O.; A Few Cases of Hysteria, by Hugh T. Patrick, Chigaco, Ill.; A New Method of Controlling Hemorrhage in Operations upon the Head and Neck, by George W. Crile, Cleveland, O.; Tripartition in the Study of the Female Pelvis, by A. Ernest Gallant, New York City; Scientific Aids to Diagnosis, by Henry D. Holton, Brattleboro, Vt.; How Should Appendicitis Cases be Treated? by Joseph Price, Philadelphia, Pa.; A Case of Unilateral Fulminating Optic Neuritis Cured by Trephining the Sphenoidal Sinus, by J. O. Stillson, Indianapolis, Ind.; The Surgical Features of Typhoid Fever and Dysentery, by Hal. C. Wyman, Detroit, Mich.; Surgical Intervention in Pulmonary Abscess, with Illustrative Cases, by W. J. Macdonald, Albany, N. Y.; Report of One Hundred Cases Operated for Appendicitis, by Wm. J. Gillette, Toledo, O.; The Surgical Treatment of Diseases of the Stomach, by A. Vander Veer, Albany, N. Y.; Some Indications for Gastro-enterostomy, by Wm. J. Mayo, Rochester, Minn.; The Young Doctor, by Emil Amberg, Detroit, Mich.; Fractures, by E. B. Smith, Detroit, Mich.; Cancer of the Uterus, by Louis Frank, Louisville, Ky.; Floating Liver, with Report of Case, by J. H. Carsters, Detroit, Mich.; The Acquirement of Nervous Health, by F. Savary Pearce, Philadelphia, Pa.

Danish Prizes for Science.—Two of the Nobel Institute's scientific prizes, each worth 20,000 Danish kroner, have been awarded, one to Dr. Finsen, the originator of light treatment for lupus, and the other to Dr. Pavloff, a Russian physiologist, for his researches in nutrition.

Yellow Fever Serum.—It is reported that a government commission has been appointed to investigate the claims of Dr. Caldas as having discovered an efficient yellow fever serum, both curative and prophylactic.

Obituary.—Dr. William A. Newell, Governor of New Jersey from 1857 to 1860, died at Allentown, N. J., August 8th at the age of eighty-four. Dr. Newell graduated from the University of Pennsylvania in 1841 and had practised medicine since with the exception of the years he was chief executive of New Jersey.

Intelligence of the death of Dr. Herman Armgardt of 317 Leonard street, Brooklyn, was received last week from Hamburg, Germany, by his relatives. Dr. Armgardt was fifty-two years old. He came to this country when he was eighteen years of age and studied medicine. After living in Chicago for some years he returned to New York and settled in the Fifteenth ward, Brooklyn, where for over twenty years he had a large practice.

Dr. Thomas Sappington, who practised medicine in Frederick County, Maryland, and Baltimore for more than fifty years, died Monday, August 12th. He was the son of Col. Thomas Sappington, of Frederick County, an officer in the army during the war with England in 1812. He was born in Libertytown, Frederick County, on October 26, 1816. He was educated in the county schools and began to study medicine in Baltimore, but owing to certain differences among the faculty at the University of Maryland School of Medicine, he, with a number of other students, left and went to Philadelphia. He entered the University of Pennsylvania and graduated from that school in 1839.

CORRESPONDENCE.

REPLY TO DR. MC MILLAN.

To the Editor of the MEDICAL NEWS:

DEAR SIR: The action of the American Medical Association in recommending the reinstatement of the army canteen seems to have aroused the antagonism of hundreds (?) and perhaps thousands (??) of physicians, according to our worthy contemporary, Dr. D. I. McMillan of Sunbeam, Illinois and he, it seems, has been appointed to voice the sentiments of thousands whose deep-tongued bay sounds "Beware!" (See MEDICAL NEWS, June 22, 1901.)

In the battles of the world great generals are matched against great generals and petty officers pitted against their like, so that I may be pardoned when I take up the defense of the American Medical Association *versus* McMillan.

To see such a grand and noble body, whose name stands for all that is best in medicine, demean itself by noticing the bark of the champion of "anti-canteenism," would indeed be humiliating. But as Louisville, Kentucky, is *small* in comparison to Sunbeam, Illinois, and as the writer plays a small part in the affairs of Louisville's five hundred physicians, he feels that the contest (?) is worthy of his unwieldy efforts.

Seriously considered, the question involved is the choice between two evils, and, as the body politic, we should choose the lesser. The best is always that which benefits the greatest number of people, and if we can have an army canteen where our soldiers may obtain pure and unadulterated liquors in moderation, surely we have taken a step in the right direction.

That the American Medical Association carefully weighed the evidence for and against the canteen cannot be doubted by any familiar with the life-work of its foremost members, and that before taking action upon such a question it fully realized that whatever position it took there would be the usual "hue and cry" of partisans for some other *"sure remedy."*

That the Association has *pitted* itself against "the Christian sentiment of the country" I make bold to deny, but, if that Christian sentiment is such that it stigmatizes without thorough investigation and painstaking study of the situation as *it is*, then the time has come for the Association *to pit* itself against the fanaticism and prejudice of so-called "Christian sentiment."

I may not be as cognizant as the gentleman from Sunbeam, of the "doings" of the fifty canteens of Chickamauga, nor as conversant with the same at Manila, but this I *do know* that the medical men of our army and the army officers themselves now fully realize the mistaken kindness in abolishing the canteen.

I don't believe that even our worthy colleague of the opposite party would dare to impugn the motives of these men who ask for the reinstatement of the canteen, so let us hope that its reestablishment will be another step to the attainment of the American soldier's health, strength and mortality.

DUNNING S. WILSON, M.D., PH.D.

Louisville, Ky., June 30, 1901.

OUR LONDON LETTER.

(From Our Special Correspondent.)

LONDON, August 3, 1901.

THE ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION—THE PRESIDENT—THE ADDRESS IN MEDICINE—THE ADDRESS IN SURGERY—THE SECTIONS—THE RECONSTITUTION OF THE ASSOCIATION—ITS FUTURE.

DURING the past week the British Medical Association has been holding its annual carnival at Cheltenham. Cheltenham used to have a great reputation in bygone days as a fashionable spa, especially favored by Anglo-Indian nabobs whose faces were as yellow as the gold they had brought from the East, and it still has about it an air of faded gentility from the number of half-pay generals and colonels and ancient dames of more or less high degree who haunt it. The best title of Cheltenham to present fame, however, is the fact that it is the seat of a well-known school for boys and a fine college for ladies. In the buildings of the latter institution the meetings of the British Medical Association were held. All the omens were favorable. The weather was delightful, the arrangements were good, and the occasion was of special interest as the proposed scheme of reform was to be discussed. There is always a large element of picnic in these annual gatherings, and probably as many members attend them for the sake of the dinners, garden parties, excursions to places of interest in the neighborhood and the miscellaneous junketings which result from the meeting of old friends, as for scientific edification. At Cheltenham ample provision was made both for amusement and for instruction, and the meeting was in both respects a success. The number of members present, though an infinitesimal fraction of a body which boasts a membership of some 19,000, was above the average attendance at the annual meetings.

The President of the British Medical Association is always chosen from among the medical practitioners of the place where the annual meeting is held. Hence unless the place be a large city with a university or at least a medical school, the President is generally a worthy man whose reputation is bounded by the confines of the town in which, like the Apostles, he fishes for men—not disdaining to gather women and children, too, into his net. The President of the British Medical Association—universally known and called (as the lawyers say) in the profession here as the "B.M.A."—for the year is Dr. G. B. Ferguson of Cheltenham, who as a graduate of Oxford has more general culture than is often found in provincial doctors in England. His oration was full of quotations in Latin, Greek, French,

and German, and ranged, as such discourses always do, over the whole universe of things medical. It ended with the statement—startling, indeed, as heard from the lips of a doctor—that "there is no death." Lest it should be thought that the President of the British Medical Association is a disciple of Mother Eddy, I hasten to explain that the words were quoted from Longfellow, and were therefore to be understood only in a Pickwickian sense.

Dr. James F. Goodhart, who was formerly physician to Guy's Hospital, delivered the "Address in Medicine." He is one of the few men in the profession who dare not only to think for themselves but to utter their thought. He is always tilting at some medical superstition. This year he had a good deal to say about what he called the "morbid readiness" of medical men to detect disease. They fix too high a standard of health for the great vital organs and condemn all who fail to come up to this artificial standard to a life of needless and harmful invalidism. "Many a one," he said, "who coddles a weak heart dies of real disease which an indolent habit has produced." The the term "catarrh of the stomach" is according to Dr. Goodhart too much on the lips of physicians as well as patients. The stomach is a good, strong, healthy servant, with possibly a prejudice or two; but if treated fairly it is most obliging and thorough. If its master from want of consideration offends it, the estrangement is only "a little domestic concern that wants no third party, such as rhubarb or creosote or salol, may be, to rub the injustice in. A little carbonic acid to soothe its ruffled feelings, and a kindly sorrow and repentance on the part of the master, with a penitential fast, and things will soon come right." Dr. Goodhart also expressed skepticism as to the "dilatation" of the stomach which is at present fashionable, and spoke very plainly as to the craze that has got hold of the public for operative treatment of real or supposed "mobilities" of internal organs. Throats and noses also "suffer terribly from this lust of operation which has beset the public." In reference to another craze, that of overdrugging, Dr. Goodhart quoted a pregnant saying of the late Sir William Gull. Once when a doctor excused himself for not having discovered the existence of a particular disease, that sententious pundit of physic remarked that it was as well he had not done so, for if he had he might have treated it!

The "Address in Surgery" was delivered by Sir William Thomson of Dublin, who did good service in South Africa as consulting surgeon with the forces, and who therefore naturally took as his subject the surgical lessons of the war. He referred with admiration to the results of American surgery in the Cuban and Philippine campaigns, and concluded with a warm tribute to the work done by our medical officers in South Africa. "They have not," he said, "flinched in danger on the field, and they have vied with their combatant fellows in deeds of valor. Six medical officers have been killed; 9 have died of disease; 12 have been wounded; 3 civil surgeons have been killed; 11 have died of disease; and 5 have been wounded. Of all branches, including orderlies and nurses, nearly 400 medical helpers have fallen victims to their labors."

Of the work of the Sections only a word or two need be said here. In the Section of Medicine there was a discussion on "Chronic Diseases of Joints, usually comprised in the terms chronic rheumatism, osteo-arthritis, and rheumatic gout, which brought out a considerable difference of opinion and led to no particular conclusion. In the proceedings of the Section of Surgery the kidney bulked large; while in that of Obstetrics, miscarriage and abortion formed the *pièce de resistance.* In the Section of State Medicine the discussions were for the most part of parochial rather than of general interest. The work of the Sections furnishes a good indication of the trend of medical thought at the time of meeting. It is interesting, therefore, to note that the Sections in which most general interest appeared to be taken were those of Naval and Military Surgery, and of Tropical Diseases. In the former the treatment of the wounded in naval warfare was discussed, and a pretty general feeling was expressed that, under the conditions now existing in British warships, treatment in accordance with the principles of modern surgery was always difficult and often impossible. In the Section of Tropical Diseases a discussion on Stone in the Tropics was opened by Mr. P. J. Freyer, formerly of the Indian Medical Service and now of London. A certain extra-surgical celebrity attaches to the name of Mr. Freyer as the recipient of one of the largest fees in the history of medicine. For attendance on a native Indian prince he was paid a sum of $50,000. The Indian Government which professes to "protect" native princes invited the fortunate surgeon to disgorge, but he preferred to retire from the service with his booty. Dr. Manson (to whom the Association has just awarded the Stewart prize of the value of $250), pointed out that two causes of stone were definitely known, namely, incrustation around a foreign body and around the ova of the bilharzia. He held that the causation of stone should be looked for in the light of a parasitic theory.

The chief interest of the meeting, however, lay in the consideration of the proposed scheme of reform of the constitution of the Association. The principle of the scheme—of which it need only be said here that its fundamental idea is to give greater facilities to the members at large to express their views on any question either of medical politics or the administration of the Association—was adopted, and the consideration of the details was referred to a Committee which is to present a report to a special general meeting to be held in October. At this meeting the proposed reforms will have to be accepted by a two-thirds majority; hence it is possible, though scarcely probable, that the scheme may be shipwrecked within sight of port. The most important part

of the reform from a practical point of view is that all members are to be compelled to belong to a Branch, and for this privilege they are to pay an increased subscription. At present a very large proportion of members are "unattached," and many of these have no desire for the privilege which it is proposed to thrust upon them. If, as is not unlikely, a large body of unattached members were on this ground to withdraw from the Association, a strain would be put on its vitality which even its amended constitution might not enable it to endure. What makes the situation still more risky is that the reformers show a decided tendency to embark on a largely increased expenditure. If the income is materially diminished by the secession of a large number of members, it will not be surprising if the B.M.A. splits into a number of independent—and insignificant—societies, and the reformers will have the satisfaction of feeling that by meddlesome treatment they have killed a useful institution. How little they reck of the financial element in the question was well shown at the meeting. Mr. Butlin, surgeon to St. Bartholomew's Hospital and a former treasurer of the Association, raised a voice of warning as to the proposed increase of expenditure; but none of the speakers who followed him thought it worth while to make any reference to the subject. Thus, as Falstaff says, doth wisdom cry out in the streets and no man regards it.

It will be interesting to watch the future of the Association. So far its history has been a record of almost uninterrupted prosperity and expansion. By a curious coincidence one of the earliest of its annual meetings was held at Cheltenham in 1837, the year of the accession of the late Queen Victoria. On that occasion its membership was under 1,000; now it is 19,000 with branches all over the British Empire. Of these 19,000 probably not more than 1 or 2 per cent. care a jot about the reform of the Association or about medical politics in any form. It is thought by some ardent spirits that the new order of things will breathe life into this huge inert mass and make it active in public work. Enthusiasm can do almost as much as the faith that moves mountains. But the age of miracles is past, and the transformation of the medical profession of Great Britain into a living political force would be nothing less than a miracle. Time, "the subtle thief of youth," may also be trusted to steal from the hearts of our reformers much of the enthusiasm which now throbs in them with so full a pulse of eager hope.

TRANSACTIONS OF FOREIGN SOCIETIES.

French.

RACHICOCAINIZATION—FRACTURE OF THE SKULL AND THE CEREBROSPINAL FLUID—THE BLOOD-SERUM IN TUBERCULOSIS—ACCIDENTAL DEATH BY COCAINE.

M. BROCA, at the Société de Chirurgie de Paris, July 3, 1901, presented a report of a fatality following rachicocainization from M. Prouf (Morlaix). The patient was a woman, sixty-two years old, with a foreign body in her foot. Under the usual precautions and in the approved manner, a centigram of cocaine was injected and the operation was satisfactorily performed. The patient was able to walk home unaided. About one hour after her arrival most alarming symptoms supervened and defied all treatment. Death occurred nineteen hours after the injection.

M. NÉLATON stated that he had seen a similar case in which the symptoms were respiratory and necessitated artificial respiration for fully three hours. For these untoward phenomena the cocaine had been unjustly blamed. The pharmacist of the hospital examined the solution and found it contained a substance which could provoke these signs.

M. CHAPUT endorsed his own custom of withdrawing a small amount of the cerebrospinal fluid before making the injection of the cocaine. Such a technic usually obviates the headache so often complained of by the patients. He has also had the satisfaction of controlling the nervousness of the patient by an injection of morphine a few moments before injecting the cocaine.

M. GUINARD has found great advantage in using the cephalorachidian fluid withdrawn as the vehicle of the cocaine injected. It tends to lessen the cephalalgia to a marked degree. Further, when such pain is present in intense degree he finds it will cease if some of the fluid is drawn off by a lumbar puncture.

M. SEGOND has had four experiences with rachicocainization and is not satisfied with its general usefulness. Two of his injections succeeded. The third failed of anesthesia, but excited grave cephalalgia. The fourth gave perfect anesthesia for an amputation, but within a few hours the patient was attacked by severe pains and an alarming pallor.

M. RECLUS did not believe in any variations in the numerous preparations of cocaine. If there were any solutions containing toxic substances it does not seem likely that he could possibly have escaped receiving and using them in an active minor surgical practice of over fourteen years during which he has generously employed the drug. He has abandoned the use of it in the spinal canal, because it so often excites severe headache.

M. TUFFIER stated that before cocainization of the spinal cord should be condemned on the count of fatality it will be necessary to obtain a full and impartial report of all the deaths from chloroform since the beginning of the discussion of rachicocainization.

M. RENDU, at the Société Médicale des Hôpitaux, July 5, 1901, related an observation he made of a man, forty-six years old, who was brought to the hospital in a state of unconsciousness. Later he showed a right-sided hemiplegia and an aphasia, making one think either of an area of softening due to a thrombosis of one of the vessels of the fissure of Sylvius or of a meningitis of localized character. He succumbed a few

days later in a coma after a series of epileptiform seizures. At the autopsy a fracture of the vault of the skull was laid bare; nothing during life had served to indicate it. It was situated in the right temporal fossa and extended forward to the frontal bone. In addition, there were present two intracranial hemorrhages, one on each side, one beneath the pia mater and the other between the dura and the pia. Where the pia had been stripped off the brain substance was much softened. A lumbar puncture during life had given a rachidian fluid slightly tinged with blood, although the quantity in the skull had been considerable. The explanation of this might be its site far up in the vault of the skull. A cytological examination of this fluid had revealed a very marked lymphocytosis.

M. Widal said that such discoveries show that the cytodiagnosis of the cephalorachidian fluid is of value not only to the physician but also to the surgeon. He has often demonstrated to himself that whenever the meninges are the seat of a chronic irritation, however slight, a marked lymphocytosis occurs within the cerebrospinal fluid. Although this has no specific diagnostic import, it serves to show in a general way what the conditions are. Since it seems to be without any exceptions it may serve to clear up the question as to whether or not the meninges are affected.

M. Widal also read a paper on the subject of the presence of *sensibilisatrice* in the blood-serum of tuberculous subjects specific like that found in the blood of enterics. In his experiments he used the method of fixation recently set forward by Bordet for the bacilli typhosi and other microbes. Every one is aware that in ordinary media the bacillus of tuberculosis creates pellicles and scales which resist solution in ordinary ways. To obviate this inconvenience he adopted with M. Le Sourd a culture rendered homogeneous by the methods of d'Arloing and Courmont. In order to be free from the glycerine and other clarifying agents contained in their bouillon they subjected the culture to the centrifuge for fifteen or twenty hours and then drew off the bacilli. This suspension of the bacilli themselves was then diluted with a seven-per-cent. solution of chloride of sodium. They developed the fact that *sensibilisatrice* is present almost constantly in the serum of the phthisical, it was in evidence once in a case of pulmonary tuberculosis before the period of softening, but the tendency seemed to be that it rarely occurred before the patient began to give clinical signs of the disease. They also found it with the aid of bacilli killed by boiling for one hour at a temperature of 72° C. It is true that this is less exact and less regular than when one uses the living germ.

M. Maurel at the Société de Biologie, July 6, 1901, discussed his theory of the mechanism of the cause of accidental death from cocaine-poisoning. We know the changes in form which the leucocytes undergo in the presence of cocaine. Further, when an injection of concentration, namely, 5 to 10 per cent., is made into the veins of rabbits (excepting the veins of the portal system), death promptly occurs when the dose is .01 centigram per kilogram weight of the animal. This familiar change in the leucocytes is that they assume spheroidal form. On the other hand, by using solutions of less strength, for example, 1-400, he was able to inject up to .03 centigram of cocaine without producing any symptoms whatever, although the amount was also per kilogram of the animal's weight. The injections were all intravenous. By the hypodermatic method a result was obtained, but much less intense. By the arteries a very active effect upon the white blood-cells was seen; but 0.100 gram per kilogram of the animal weight could be used before causing death. A similar effect was seen when the portal venous system was used. It appears then that the danger of cocaine lies in injection into the veins, other than the portal, in a concentration sufficient to either kill the leucocytes or to cause them in large quantities to assume the spheroidal shape. He also found in the pulmonary vessels great accumulations of these white cells forming real embolisms. Hence he concludes that in sudden death from cocaine there exists an embolism of the pulmonary vessels composed of such dead or spheroidal white blood-cells.

SOCIETY PROCEEDINGS.

BRITISH MEDICAL ASSOCIATION.

First Day—July 30, 1901.

(Continued from page 236.)

Address in Medicine.—Dr. James F. Goodhart of London gave an address, entitled "Friends in Council," in which he spoke of the doctor as the potter and the wheel of animal life and their mutual relation to the living body of their patient. In speaking of the vitality of life he said, "All our parts are one. So absolutely one that it is impossible to suffer bad pain in two separate parts of the body at the same time—one comes and the other goes. So absolutely one that when one thinks hard the feet grow cold, so one that when one member of the body suffers all the members suffer with it; so one that the temporary failure to lock or unlock the points at the many junctions and sidings will disarrange the whole. So much so that to any thinker sufficiently detached from himself it may well seem that the harmonics of the song of life are so extremely intricate as to be impossible of performance. And yet the song of life is sung, and on the whole to most of us the result is beautiful. And then behind all, or rather before it, is this curious unfathomable mystery, 'the boon of life.' 'I needs must live,' the body seems to say. Some cynic asks where is the necessity. But that is life, or all we know about it. The 'needs must' live, an unconscious blind unquenchable energy

that carries on the being irrespective of his will, and which, blending with his conscious will, renders the clay at once so plastic, and yet too at one and the same time so unimpressionable."

Vital Energy.—He then went on to speak of the living energy of the body and its influence to keep men alive under diverse conditions. "The spirit of life has no knowledge of death. It is always eager, and death comes to it as a catastrophe by the fault or decay of its subordinate ministers—the brain, the heart, lungs, liver, skin, and so on. And this irrepressible living energy will carry on to old age a very weakly flesh. In saying this I think of the disappointed ones in the race, the tired, the painful; for I have come to the conclusion that there are those who are tired, who are full of pain, from early years even to old age. There are many of these who have missed their mark, who must be very weary of life, but the motive force of their being will not let them go. I suppose, too, that this ever restless, yearning life within us tends to show up the weaknesses of our bodily construction. It is, no doubt, only to be expected that with a restless driving power within us joints that are losing the polish of their early smoothness, bores that no longer allow of sureness of aim, tired bodies that need sleep or rest—organs, in short, that now work with labor that before ran riot in their unconscious ease—should, if stimulated, express their work in weariness that is perhaps worse than pain. Let me give an example: There are a large number of people who at the present day come and tell you that they cannot think or that they cannot concentrate their thoughts. I seldom find that the associates of these have observed any difference in them. They can, in fact, think well enough, only thought is conducted with a sense of labor now, whereas in times gone by it had glided on untold. Who does not know, too, of the common complaint of muscular fatigue, the man or woman who is always tired? The muscular apparatus works with conscious labor, and thus all the pleasure of living is taken away; and you cannot cure these people, because they are mostly people full of vital activity; the spirit within them is a willing one but the flesh is weak."

The Difficulties of Medicine.—"It is clear, without laboring the point, that a body so composite as ours is so very delicate a machine that there must be many and many a case presented to us where we do not, many even where we cannot, know what is the matter, and taking even the most favorable view of the progress of scientific discovery it is probable that this will be so till time shall be no longer. We cannot know because the intricacy of the machine hinders one in getting at the real facts. We cannot know because even when we have got at the facts we cannot be sure that the remedies used will get at the disease. When we come out of the aloofness of the contemplation of growth, nutrition, degeneration, and death to take part in the active grappling with these by stimulating this function and dulling that, in the attempt, in short, to arrest or stop disease, our difficulties become appalling, but this is quite unrecognized by most of those with whom we have to deal. Take the liver or the bones as concrete examples. Of the bones and the exchanges that go on between them and the other component parts of the body, I think we may say we know nothing, and yet no doubt they extract material from the general store that the general store is better without, and they return to the common stock material which is beter adapted by the abstraction for the purposes of other parts. Then the liver, the largest organ in the body; its imports and exports must be enormous, and from the familiar way in which it is spoken of there cannot be a man in the whole world who does not think he knows all about it. But what are the facts? We know something about the physiology of the liver, but this knowledge has been mostly obtained by experimentation on the lower animals, by observations that occasional cases of disease afford us, and by certain inferences that we draw —very much at second hand—from the changes produced by disease in the organ. But all these things, valuable as they are, and without which where we should be I don't know, yet are very far from giving us that real and intimate knowledge of the living organ that we require to enable us to treat its diseases."

Individual Character in Medicine.—"Take next the vital element and its bearing upon the handling of disease. Here again we are often foiled when we would be positive because of the personal equation, as it is called, the individuality of the patient. When Mrs. Smith asked her doctor why it was that a particular pain possessed her, he is said to have replied with ready wit and no less truth, 'Madam, it is because you are Mrs. Smith.' And the lady no doubt thought her doctor a very amusing man, but she had not a glimmer of the great truth that had been administered in such an excellent coating. But, indeed, that 'because you are Mrs. Smith' constitutes one of, if not the most, insuperable of the difficulties of framing any system of precise medicine, and over and over again fattens crass ignorance at the expense of real knowledge. In the practice of medicine you cannot jump the fact that the inflections of your voice are not exactly like those of any one else; and as long as the world lasts, this variability of the living force, this individuality, will prevent the attainment of the popular desire—a cut and dried remedy—not only for every disease—that is no use to Dick when the remedy touches only Tom's variety; no, we want a remedy for every disease, and for every variety of it, as met with in the young and in the old, in the otherwise

healthy and the unhealthy, under the specious garb of mildness, or the pronounced type of malignity, that is another of the cruxes of medicine that the world wots little of. And then as part of the animal energy of man, of the spirit of life, perhaps the chief human expression of it, comes that wonderful indescribable something that we call hope. One hears talk of forlorn hopes, but hope is never forlorn; its springs is always light and buoyant, and it is as indomitable as life itself. Of all the unnatural conditions of which medicine takes count, perhaps none is so much so as life without hope. When hope flies out of the window death is lurking at the door, but in the good providence of God man cannot quench it, and I beseech you that you never try. With human life, then, and hope before us we may pass on to the patient who embodies them, and to the doctor who, while also similarly endowed, has yet to influence and control them as best he may."

Patients.—"We must for a moment consider each of the two parties, their influence upon each other and thus upon the progress or otherwise of scientific medicine. Are we gradually surging on by a natural process of evolution to a perfect system of the treatment of disease? Is the management of the sick man and the ailing man in the present day as perfect as it might be? On the larger side of the subject—that of preventive medicine and the scientific knowledge of disease—it is obvious that great discoveries have been made in the recent past, and the dawn is surely breaking of a still more brilliant day. So far as this side is concerned I think it may be said that we are steadily working upwards to that time when much of the present gross disease—tuberculosis, microbic fevers, etc.—shall be no longer. On looking over the field of disease, although it is said that the average duration of life is longer than it was, I neither find that medicine is less often in request, nor that an ailing public is less in evidence. I am here to contend on the contrary, that we are growing more and more sensitive about our health, more impatient when the flies of ill health worry us, that we are crying more loudly for a cure for every disease, whether it be one that is commencing and curable or so advanced that—as, say, in a bad case of phthisis—the greater part of an organ is practically destroyed, and a restoration of its health impossible. This is shown in several ways: in the first place the sick man wants to know too much. He wants to know what is the matter with him when it is not possible to tell him; moreover, he will have an answer, and if not he thinks the doctor an ignoramus, and calls in someone else. It is because the public will have a disease ticketed when there is no means of identification that these difficulties arise, and because it still sets such store by the man who plunges. How much better would it be if the obvious were better recognized that the doctor is but mortal, and if others than ourselves could take part intelligently in our doubts and difficulties. And having got a name for his complaint, from either wisdom or ignorance, the patient thinks his physic tumbles out of the same slot, and that between the two he will be cured offhand."

Doctors.—"And now for the potter who has more or less to fashion this clay as it somewhat impulsively rolls along under the momentum of the wheel of life. The simile is not a good one, for the doctor is never a fashioner, although sometimes in the plenitude of his pride he conceives himself to be, and then o'erleaps himself, not he, but his patient, unfortunately, falling on the other side. What are we doing in this impatient, restless age to stem the tide, to stay the panic, to bid the people keep its head? I do not mean in the immediate present, for we always do our best for the patient according to our lights, but with our eye on the future and that continuous progress as individuals for which the Goddess of Medicine is marking time, and surely points us to. I do not doubt, I say, that everyone of us does his best for the man that consults him, but I am not sure that in attending to the exigencies of the immediate present we do sufficiently take heed of the future. First may be put a morbid readiness on our part to detect disease. Engaged as we are in this pursuit there comes a risk that we too little appreciate the wide range of health; that is, how good a state of health is compatible with numberless slight and even sometimes considerable departures from normal. We tend to make our standard too severe for practical purposes."

Drugs.—"Now, why do we give drugs? To cure disease, you answer at once, and think the question unnecessary. But wait a minute; we give drugs for several other reasons, some of which are far less free from criticism. For example, drugs are often given, not because the disease demands one, but because the patient is not happy till he gets it: too often he is not happy even then. They are given sometimes to hide our ignorance, I fear, or to mark time while we watch and wait; they are given sometimes as a gambler on the Stock Exchange speculates in 'futures,' an enhanced reputation being the windfall that it is hoped to secure; and then we often give drugs as an experiment in the hope that they may do good. I will deal with this last more especially, for it is a reason for giving drugs about which the public are peculiarly sensitive and ill-informed. It is often said as a matter of prejudice against the hospitals of our country—than which none could possibly be conducted more humanely and considerately—that the patients are made the subjects of experiment. So they are. But this happens not only in the hospital. If it be true—and it is true—that you and I are unique in our way, and that it is this individualism of

man that constitutes the great barrier of the evolution of any system of medication, it follows that each new patient who demands treatment is more or less a case for experiment, and it is by experiment of this qualified kind—upon the king as he sits upon his throne, as for the poorest being within his realm—not only that the value of drugs is established and new powers gained over disease, but by which an increase of knowledge of disease itself is gained. The cure of disease is always the fundamental object; but not far behind it should come the alert eye to watch the deviations from the hypothetic normal which the individual resistance or the drug in its action may show in the course of the case. All treatment by drugs is more or less of an experiment, and it is, indeed, in this fact that the enormous number of new drugs daily poured upon us finds its justification. Many and many an ailment that afflicts mankind badly needs a remedy, but for which, as yet, no remedy is opportune; and who knows but what in each new drug some human ill may find alleviation?"

The Dangers of Routine and Fashion.—"Now all this routine and fashion, and remember I have only taken one or two instances out of numbers that lie at my hand, I object to, and I do so because it all tends to establish false relationships between the doctor and his patient, and let me attempt to show you how. The patient first of all asks us for a name to his disease, and whether we know or not we give him one. In so doing we, as I say, speculate in 'futures'; and this is a form of business that very often ends in bankruptcy. No remark is more frequent at a consultation than that we must give a name to the disease. I object to giving a name to anything I am not sure about, and when a man says to me, 'That is all very well for you, but it would never do for me,' I object still more, because the general practitioner is the great instructor of the public in matters medical. I have not a tithe of the influence that he has, and by giving names to symptoms that are doubtful in their significance, he is first of all losing an opportunity of insisting upon the dignity of ignorance; then he is conveying to the public the erroneous notion that we have the power of insight into problems that are at the time inscrutable; and we ultimately end in deceiving ourselves into thinking that we know much more than we do, an idea that is fatal to the progress of knowledge. There are hundreds of examples that might be given, but the various febrile disorders are the most fertile in discords of this sort. It is often absolutely impossible in the early days of typhoid fever to say what is the matter; equally is it absolutely impossible in many of the eruptive fevers to say what of several things will eventually declare itself. It is not ignorance but knowledge that halts. When I first entered Guy's Hospital, some thirty-six years ago, it was a common saying about one of our staff at that time, and certainly one of the best physicians of that day, that he knew so much that he could but seldom be prevailed upon to give a positive diagnosis. And it is true, as Sir Arthur Helps says in the book from which I have borrowed the title of this address, that knowledge brings doubts and exceptions and limitations that are all hindrances to vigorous statement."

Indiscriminate Drug-Taking.—"Then a word about the evil of letting the public force our hand in the matter of drug-taking. I have already alluded to routine as destructive of all scientific observation, enabling as it does the giver to see only cures and nothing of failures, though they be in very truth staring him in the face. But I am now alluding especially to the numberless occasions when drugs are given, there being at the time no distinct indication for giving anything. There is no doubt that this is a very common and bad fault with us. I do not say it must never be practised. There are times when the sick are not reasonable beings, and unless they have a bottle of medicine to anchor their faith to (oh, shifting sands!) they are in a state of unrest that is positively harmful to their progress. But there are multitudes who are not in this parlous state, who are capable of listening to reason, but who as now, having been taught to look for their prescription or their bottle of medicine, have no idea of the value of advice only, or of the need of the watchful eye. Why, we are all familiar with the 'Are not you going to give me a prescription?' when you have been pouring in advice with much prodigality of tongue, and had flattered yourself that you had gained a disciple; and there is no need to go far to be absolutely sure that the great body of the public, rich and poor, pay for our prescription, and that they do not value by a button any advice that lies outside it."

Value of Advice.—"But I think there is another reason for this indifference to the value of advice which, although it is perhaps one that savors of the sordid, I must nevertheless touch upon. I have often inwardly contrasted the two professions of law and medicine, how in the one advice pure and simple is sought and found, and the givers thereof acquire positions of milk and honey, and find themselves mounting to the high places of the land. In the other medicine passes for the consideration, and, well! the sellers thereof do not seem to possess themselves of many coveted places of honor. And if you ask me why this is, I believe it to be because we make ourselves too cheap. Advice—just think of it! A product of so unique a value, that when a man of great experience in the world of medicine dies his knowledge dies with him; no other man can supply his place, and there is a dead loss to the community of a mine of unrealized information. You all know that very clever signboard in which a bullock is seen gazing yearn-

ingly upon a small jar of meat extract and exclaiming, 'Alas! my brother.' But I often wish that I could pot my brothers as they flit from off the stage; my trouble is that my masters die unbottled. And yet we 'give' advice, and there are those in number who not only accept, but ask the gift. Oh, dreadful degradation that advice, a priceless article, should fall in value below cheese and butter! It is told of the late Sir Andrew Clark, with what truth I do not know, that when he was asked to give gratuitous advice he said, 'No; but I will give you the money with which you can purchase it.' Whoever said this was a wise man; for on the one hand there was in the answer the generosity that knows no bounds of medicine to poverty; there was on the other the dignity and self-respect that fully understood the preciousness of the knowledge that he had the power to impart; and we shall never make the public understand the true position of medicine until we set a higher value upon *ourselves* and upon the *advice* we give. The laborer is worthy of his hire is but one side of the question, and not the best side, for it might be held to cover many a sordid act; the other and much the more important is surely this, 'See to it that the hire is worthy of the laborer.' And although expressed in these terms the face value may seem to be one of low ideals, I am far from thinking, as I speak, of any money consideration, but of the higher and nobler recompense of dignity and self-respect. And it is, in part, because I think that to careful observation it must seem that the very nobleness and generosity of medicine does tend somewhat to make us forget the importance to its well-being of these just rewards that I have chosen this subject for my address to-night."

SECTION OF MEDICINE.

Research in Medicine and Therapeutics.—Dr. E. T. Wilson of Cheltenham read a paper on this subject. The rapid evolution and general trend of modern medicine are due to the spirit of the times brought about by facilities for communication and interchange of thought. Science is no longer cramped, but has become free to the world. Of the newer problems which are to be presented he mentioned the relationship of peripheral neuritis and beer-drinking and malaria as of special interest at the present meeting of the Association. Activity prevails in every department of medicine and surgery, but in none have so many valuable results been obtained, in none have so many hopes been excited as in the scientific study of the infective diseases, of the exotic fauna and flora of the human body. The bacteriological diagnosis of certain diseases has become a matter of routine, and there can be little doubt that in the near future a need will arise for laboratories and specialists in every large center of population, to whom questions insoluble or doubtful in their clinical aspects may be referred, on whom will rest also the responsibility for the supply of such vaccines and serums as may be required in their several districts.

Improved Diagnosis.—An improved diagnosis, however, is but a small portion of the gain which has been derived from a scientific investigation of the causes of disease. Over a large part of the field of therapeutics a new direction has been given to treatment. Students are learning to look beyond the collection of symptoms which were once held to constitute the disease, with the result that, although symptoms will continue to claim the attention, and certainly that of patients, the true objective of treatment will be the micro-organism itself. Physicians are learning more and more at the hands of a new pathology to regard the human body as a battle ground on which important issues have to be fought out between invading organisms and poisons coming from without, on the one hand, and on the other those forces inherent in the system, of which so little is known as yet, but which may be summed up in the term "resistance," or in one older and better known, the "*vis medicatrix Naturæ*." Every disease which can be won over for the infective class becomes at once, if only in theory, preventable, and our treatment acquires a tangible and definite aim. In the first line of defence comes the destruction of the parasite before it obtains a lodgment in the body; and this will be divided between the health officer and the medical attendant, for it comprises the whole array of hygienic measures, including the isolation of the infected sick.

Parasites, Internal and External.—The means of attacking the parasite within the body are at present limited in extent, but some progress has been made, as, for instance, in the treatment of lupus by sun exposures, of rodent ulcer by the X-ray, and of tuberculosis of the lung by life in the open air. An additional defence is found in the vaccines, by which immunity, artificial or natural, is secured, such as the Cuban enjoys against yellow fever, or the vaccinated with cow-pox against variola. In serumtherapy an appeal is made to powers which cannot at present be explained, whereby for each several toxin produced by an organism in the blood a special antitoxin is forthcoming, and it is the possibility of supplementing this supply by artificial means which has deprived diseases, such as diphtheria and tetanus, of the terror with which they were wont to be regarded. Lastly, behind all these, there are in reserve the enormous powers residing in the blood-cells of offering a successful resistance to the invading organisms, a resistance the vigor of which is easily impaired by unfavorable circumstances, and which it will become more and more the aim of medicine to foster and improve.

Work Still to Be Done.—The number of the infective diseases is by no means complete, and it becomes almost possible to breathe a word of hope where despair has hitherto prevailed, that medicine may yet find work to do in the treatment, preventive it may be, of the neoplasms which occur with ever-increasing frequency. The cancer which the surgeon now removes with such consummate skill is not the disease; it had its beginnings in an insignificant outgrowth, during which the rapidly proliferating cells, estranged from their accustomed environment, would probably be vulnerable were it known how and where to attack them; and further back still lies the exciting cause, on the exact nature of which medical opinion is divided; there seems, however, good ground for suspecting that here, too, one has to deal with a micro-organism, and an infective disease, the remedies for which, though they may be long in coming, cannot be regarded as beyond the reach of human attainment.

Chronic Diseases of Joints.—Dr. A. E. Garrod opened the discussion on this subject. He said that several types should be differentiated, ranging in anatomical appearances, pathological processes and clinical features. Two characteristic varieties of rheumatoid arthritis were a fusiform type, occurring in early life, even in children with much disturbance of health, and a nodular type occurring in more advanced life, with little effect on bodily condition. The former had been considered to have alliances to rheumatism, the latter to gout, but it was by no means certain that such relationship exists. Clinical methods were insufficient to separate the affections.

Cheltenham Waters.—Dr. A. P. Luff said that many patients were sent yearly to Kissingen, Wiesbaden, Carlsbad and other German spas who might better go to Cheltenham. Two varieties of waters were to be found there, one resembling Marienbad waters, rich in chloride and sulphate of sodium; the other contained much magnesium and sodium sulphate. They were useful in constipation, obesity and dyspepsia and not useful in gout, but were valuable in intestinal catarrhs, glycosuria and rheumatoid arthritis. The summer season was most favorable. A wholesome activity on the part of the authorities would bring about a movement in the restoration of this city's old time popularity as a health resort.

Pneumococcus Arthritis.—Dr. Nathan Raw read this paper. He discussed in brief the possibility of metastatic involvement of different regions of the body by the diplococcus of Fraenkel and gave the histories of seven cases in which involvement of the joints had occurred during the course of frank pneumonias and in which the organism was obtained from the affected surfaces.

SECTION OF SURGERY.

Surgical Treatment of Renal Tension.—Dr. Reginal Harrison of London discussed this important topic under three heads: What grounds are there to suppose that increased renal tension may induce kidney lesions? Can such tension be relieved by surgical means? and how? Certain marked analogies of the effects of increased arterial tension on important structures, such as in the eye in glaucoma, etc., render it more than likely that like conditions of tension in the kidneys bring about grave structural changes, and clinical surgical experience in operations on the kidney has led him to believe that such tension does bring about nephritis, and the relief of the tension helps the kidney lesion; it also has its effects upon the general tension of the entire circulatory apparatus which is so markedly altered in kidney lesions. He then discussed in detail the methods devised by him to make an incision in the capsule of the kidney and thus relieve the tension in that organ. (See MEDICAL NEWS, Vol. 78, p. 447.)

Operative Treatment of Renal Calculus.—Dr. J. Hutchinson, Jr., of London said that the use of the X-ray had improved the treatment of this disease in that it had made diagnosis positive, had shown the size, number and location of the foreign bodies, and had made operation simpler, safer and surer. The safety of opening the pelvis of the kidney rendered it unnecesary to split the cortex, and thus made the operation much more simple and less dangerous.

Gastric Dilatation Due to Movable Kidney.—Dr. H. Bramwell of Cheltenham reported a unique case of movable kidney which dragged with it its peritoneal coating, forming thereby thick constricting bands which interfered with the functions of many of the hollow viscera, notably the pylorus. This was constricted and its spasmodic closure gave rise to an enormous distention of the stomach, bringing about the patient's death.

Femoral Hernia.—Dr. R. H. Parry of Glasgow described an operation for closing the crural canal from above. By means of his method the cup-shaped remnant of the crural canal was done away with, and the liability to damage of the femoral vein was avoided. The technic of the operation should be consulted in the original.

Shock in Prolonged Operation.—Dr. W. H. Brown of Leeds spoke of the well-known use of saline transfusion in the treatment of this condition.

SECTION OF OBSTETRICS AND GYNECOLOGY.

Puerperal Fever, Uterine Cancer, and Falling Birth-Rates.—These were the subjects discussed by Dr. J. W. Byers of Belfast in the opening address before this Section. In 1847-1856 the mortality from puerperal fever was in England and Wales 1.8 per 1,000. It rose to 2.28 in 1875-1884, and to 2.46 in 1886-

1895. The following figures give the most recent available statistics:

Year.	Deaths from Puerperal Fever.	Death-rate from Puerperal Fever per 1,000 births.
1895	1,849	2 0
1896	2,053	2.2
1897	1,836	1.9
1898	1,707	1 8
1899	1,908	2.0

Deaths of women at all ages from puerperal fever and other accidents of childbirth per 1,000 registered births in England and Wales: 1871-80, 4.72; 1881-90, 4.73; 1891-99, 5.12.

The following figures show the number of deaths in Ireland tabulated under parturition (accidents) and puerperal fever:

Year.	Total.	Death-rate per 1,000 Births Registered.
1895	769	7.2
1896	679	6.3
1897	696	6.5
1898	560	5.3
1899	601	5.8

For the same years the deaths and rate per 1,000 from puerperal fever for the whole of Ireland were as follows: 1895, 3.0; 1896, 2.3; 1897, 2.1; 1898, 1.7; 1899, 2.0.

TABLE SHOWING THE DEATH-RATE FROM PUERPERAL FEVER IN SCOTLAND DURING THE FIVE YEARS, 1895-1899.

Year.	Number of Deaths.	Proportion in Every 100,000 Female Population.	Proportion in Every 10,000 specified. Causes of Death.
1895	253	12	62
1896	220	9	63
1897	205	9	52
1898	227	10	59
1899	214	10	54

STATISTICS OF THE ROTUNDA HOSPITAL.—One may contrast these lamentable statistics with the following returns for the last two years of the practice of the Rotunda Hospital, the largest lying-in charity in the three Kingdoms:

MORTALITY AT THE ROTUNDA HOSPITAL FOR THE YEARS 1898-99 AND 1899-1900.

——	1898-99.	1899-1900.
Intern Maternity:		
Total cases	1,591	1,560
Total mortality	10	6
Percentage mortality	0.62	0.38
Mortality from sepsis (2 of these admitted septic)	5	0
Extern Maternity:		
Total cases	2,163	2,109
Total mortality	8	5
Percentage mortality	0.36	0.23
Mortality from sepsis	2	0
Total cases	3,754	3,669
Total Percentage	0.47	0.27

For two years the total was 7,423, and the percentage 0.30.

These figures he said should make those who are teachers feel how great is their responsibility, and that all efforts should be redoubled in urging upon students the importance of regarding the process of labor as a natural one, and not to be lightly interfered with unless Nature herself should fail, and that if interference becomes necessary they should use exactly the same antiseptic precautions that they see employed in any gynecological operation. It is by the observation of these two principles—the avoidance of meddlesome interference and by the rigid use of antiseptic principles—that the practitioner may hope that in the present century the occurrence of puerperal fever will eventually be as rare in private practice as it became in the nineteenth century in lying-in hospitals. The importance of early diagnosis of cancer of the uterus was dwelt upon. Any woman, he said, with abnormal hemorrhage at any age, and especially if she is over thirty-five years of age, demands the most careful clinical examination.

The Falling Birth-Rate.—During the present year the public press has been calling special attention to the falling birth-rate. It would appear that in England and Wales in 1861-71 the birth-rate per 1,000 was 34.8. In 1871-81 it was 34.7; in 1891 it was 31.4 per 1,000; and since that it has steadily gone down until in the last year of the century, 1900, it was only 29 per 1,000. In 1875 35 children were born in the United Kingdom for each 1,000 of the population, while in 1900 there were only 29. In other words, this means for our population of 41½ millions we are losing 249,000 children annually, and the birth-rate has fallen by 2.67 in the last ten years. The actual increase of the population of England and Wales is due to the fall in the death-rate and the increase of immigration. We are thus rapidly in England approaching the condition prevailing for some time in France and America. It was not for him at present to discuss the causes of this declining birth-rate; rather his duty was to ask what remedy can doctors suggest to combat a state of matters which, from a national and imperial standpoint, must be regarded as most unsatisfactory. If fewer children are in the future to be born in this country, efforts must be doubled to lower the high death-rate of infants, which during the first year of life amounts in England to 154 per 1,000, by teaching the people to pay much greater attention to rearing their children properly, and by urging the public authorities to provide an adequate supply of pure milk. Our American friends are far ahead in such matters, and they showed their usual extraordinary enterprise last summer, when they sent pure, non-sterilized milk from various parts of the States (Illinois, New Jersey, and New York) to the Paris Exhibition, where it was actually pronounced better than the average milk sold in the grounds. Quite recently "The Rockefeller Institution for Medical Research," founded by a gift of £40,000 from the millionaire whose name it bears, has decided that the first investigations to be undertaken

by the scientific experts connected with it will be to co-operate with the New York Board of Health in studying the milk supply and the contaminated article as a source of danger. But this serious problem may also be attacked in another way by taking greater precautions when a woman is pregnant that she may give birth both to a living and healthy child; in other words, more care must be taken to combat those conditions which are so dangerous to the child's life before and during its birth. It is still too frequently the practice of the present day, when a patient engages a medical man to attend at her confinement, simply to note the engagement, to give a few general directions, or perchance none at all, and perhaps in some cases, to examine the urine. Obstetricians should give a much more careful attention to patients who are pregnant, and especially in the case of those looking forward to their first confinement. A pregnant woman, when she engages a doctor to attend her, should be examined as carefully as if she were an applicant for life insurance; in this way he may at an early date detect a flaw in some of her organs (heart, kidneys, lungs, etc.), the knowledge of which may lead him to adopt a judicious prophylactic treatment. Patients should be instructed on such questions as diet, exercise, and management of the secretions; and a most careful examination should be made of the urine from the fourth month onwards, not merely as to the presence of albumen, but in reference to its total amount and the reduction of urea. In this way a form of toxemia (eclampsia), so fatal to mother and child, may from its early detection be carefully warded off, for it must be admitted that, in the vast majority of cases, the treatment of eclampsia, like postpartum hemorrhage, is its prevention. Toward the end of gestation a most careful abdominal examination should be made, so that the position of the fetus may be learned, the amount of liquor amnii, the presence or not of an abdominal tumor, and, if there is the least suspicion of deformity, the pelvic cavity should be most carefully measured. One must also guard against the dread influence of the syphilitic poison and the injurious effects of anemia. In the case of multiparæ, an accurate history of the previous pregnancies and labors is of the utmost importance. In this way, by a careful and if necessary by a repeated examination of the patient, by an early detection of complications, they may be warded off or kept in such abeyance that their danger is minimized; and, if there should be any deformity of the pelvis, the method of delivery best suited for each particular case may be decided upon. By all these measures one can hope that not only a living but a healthy child may be born, and that by careful management of the patient during and after her confinement no subsequent gynecological disease may ensue which so often gives rise either to a permanent sterility or to an early subsequent miscarriage.

Miscarriage, Prevention and Treatment.—Dr. P. Horrocks of London spoke of the different varieties of damage to the normal attachment between maternal and fetal parts, the fetal pathological conditions and the maternal diseases general or local. The things to be avoided, he said, were active exercises indoors or in the open, falls, blows, coitus, shocks, frights, bad dress, alcohol, hot sitz baths, emotional excitement and late hours. Things to be corrected were obstructions, inflammations, displacements, unsuitable diet, dyspepsia, flatulence and colic. Conditions to be treated were syphilis, fits, bad health, anemia, zymotic diseases, lacerations of cervix, and pyrexia. The lines of treatment were those commonly in use and described in textbooks.

Malignant Decidua.—Dr. Horrocks read notes on a case of this kind and exhibited specimens.

Cæsarian Section.—Dr. M. Munro Kerr of Glasgow said that the operation had been performed in the Glasgow Maternity between sixty and seventy times since April, 1888, that septicemia had been the cause of death in all the fatal cases, and that the infection had come by way of the vagina and cervix rather than by the abdominal wound. Preparatory cleansing of the vagina, therefore, was a prerequisite when this procedure was under consideration. The uterus was not drawn out through the wound; the incision was longitudinal and in the middle line. The patients were rendered sterile by tying the Fallopian tubes in two places and excising between.

SECTION OF TROPICAL DISEASES.

Advance in Knowledge of Tropical Diseases.—Dr. Ronal Ross of Liverpool prepared this paper, taking up in brief the advances made in a number of tropical diseases.

Yellow Fever.—The discovery of at least one mode of infection in yellow fever—a discovery of the highest importance to mankind—emanates from America. For some time past several of our American colleagues, stimulated by recent observations in connection with malaria, have sought an experimental verification of the hypothesis of Finlay and others, that yellow fever also is communicated by the bite of gnats. Insects fed on patients were subsequently induced to bite healthy persons who volunteered for the experiment. The results were negative until the gnats were kept for an interval of twelve or more days between the two operations. Success was now immediate. Drs. Reed, Carroll, and Agramonte record in their last report that out of seven non-immune persons subjected by them to the bites of infected mosquitoes, six yielded undeniably

positive reactions. At the same time, seven non-immunes whom they endeavored to infect by means of the fomites of patients under peculiarly favorable circumstances, remained in every case free from the disease. The experiments were conducted under the most stringently scientific conditions. Although the mosquito theory of yellow fever does not possess the parasitological basis of the mosquito theory of malaria, the differential observations of Reed, Carroll and Agramonte are of a nature to leave no doubt concerning the soundness of their conclusions. Some of the tests have involved great heroism on the part of those who were subjected to them. Since the death of Dr. Jesse W. Lazear we have to deplore that of Dr. Walter Myers, one of our most promising young pathologists, who lost his life from yellow fever when on a deputation from Liverpool to study that disease.

Ankylostoma Duodenale.—Another important advance is contained in the confirmation of Giles's life-history of the ankylostoma duodenale by Annett, details of which will shortly be published. These observations throw a vivid light on the route of infection adopted by these dangerous and widespread parasites.

Undulant Fever.—Owing to observations made by Wright on the serum reaction in undulant (Malta) fever, this disease has been shown to exist in India, Hongkong, the United States, the West Indies, and Brazil—a most important fact in connection with the great subject of tropical fevers.

Malaria.—The recent advance in our knowledge of malaria has been well maintained by numerous observers. The practical side of the mosquito theory, which at once became predominant after the determination of the life-history of the parasites, has been energetically treated by Koch and his assistants, who have successfully dealt with malaria on a large scale by means of quinine. Similar work has been performed with success in the United States, and in Italy. In British possessions isolated efforts to deal with malaria according to the new principles have been made by Sir William MacGregor and Strachan at Lagos, and by Thomson and Young at Hongkong; but the country generally has not adopted an intelligent attitude in this connection. On the other hand, British workers have closely studied details of the malaria question in many parts of the world. We must refer especially to the good work done in Central and West Africa by the Malaria Commission of the Royal Society, and to an admirable sanitary survey of Nigeria made by the Liverpool expedition during the last year. Direct cultivations of the parasites have been reported by Daniels, Ziemann, van der Scheer and van Berkelom, and Woldert in various countries—all in *Anopheles;* while Manson has completed an interesting crucial experiment for the popular demonstration of the theory by infecting healthy persons (T. Manson and Warren) in London by mosquitoes brought from Italy, and by simultaneously preserving others (Sambon and Low) in health in the Campagna in a mosquito-proof house. Nuttall and Shipley, Christophers and Dutton have closely examined the anatomy of gnats. Nuttall, Cobbett, and Strangeways-Pigg have made interesting researches on *Anopheles* in England, in which, by the way, cultivation experiments have hitherto failed. Gosio, Giles, Reinhold, Ruge, Fearnside, Neveu-Lemaire, and others have done useful work on the subject in many directions. It remains, however, a matter for regret that stronger efforts have not been made to determine the reason why individual gnats of an amenable species so often resist infection. Until this difficulty is cleared away negative experiments with *Culex* cannot be entirely convincing.

Filariasis.—In regard to filariasis the discovery of Low and James has been confirmed and amplified by several observers. Manson has suggested the possibility of reducing lymphatic varix by leading a lymphatic duct below the stricture into a neighboring vein.

SECTION OF STATE MEDICINE.

Statistics and Disease.—Dr. S. F. Murphy, President of the Section, read this paper, in which he advocated a closer attention to statistical information, since by such careful scrutiny many important hygienic deductions might be drawn which would prove of service to state medicine.

Sanitary Administration.—Dr. Bond of Gloucester opened a discussion on this topic dealing with local conditions.

Municipal and County Laboratory Work.—Dr. E. C. Steaton of London in his paper said that laboratory work entered more and more into the routine of public health and sanitary departments. In every large town there was a demand for bacteriological examinations for the general practitioners and also for hospital purposes. The sanitary authorities should pay attention first to matters concerning the public health and not to questions of commercial fraud. It was of more importance that the community should be protected from preventable diseases such as tuberculosis, measles, scarlet fever, typhoid, smallpox and malaria than to be told about and guarded against the lesser evils of glucose in candies, pumpkin rinds in strawberry jams and other matters of commercial adulteration in foods which while all too common are not of great moment after all.

Plague and Its Prevention.—Dr. D. S. Davies of Bristol read this paper, which embodied the central ideas of ship detention, killing of all rats, thorough disinfection, and prevention of interchanges between ship rats and shore rats.

(To be continued.)

NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting, Held Monday, May 20, 1901.

The President, Parker Syms, M.D., in the Chair.

Cancer of Larynx and Esophagus.—Dr. Francis J. Quinlan presented a set of specimens from a case of cancer of the posterior wall of the larynx, involving the esophagus. When the patient first came under observation the symptoms were very slight, but persistent despite treatment. Absolutely nothing could be seen in the laryngoscopic mirror. The course of the malignant neoplasm was entirely latent for a long while and the symptoms produced were very obscure. After a time the affection began to run an acute course and, finally, the tumor made its appearance at a time when the walls of the esophagus were already infiltrated.

Palliative Treatment.—Radical operation seemed out of the question since all of the malignant neoplasm could not be removed. The ligature of the carotid on the affected side was tried with the idea of starving the growth. Dr. Dawbarn ligated and extirpated a section of the carotid, but this failed to afford any measure of relief and after a halt for a short time in the course of the case, the neoplasm continued its invasion. In a certain number of reported cases, ligation of the carotid has under these circumstances done good in delaying the course of the new growth and making the patient much more comfortable.

Perineal Prostatectomy.—Dr. Parker Syms presented the specimen of an enlarged prostate which had been removed by perineal incision, using a special technic and instrumentation which he has devised. The patient was a man sixty-two years of age and for months had suffered from complete retention of urine. He had only succeeded in evacuating his bladder by the constant practice of catheterization. The bladder was very much distended and capable of containing some nineteen ounces of urine. Dr. Syms used his perineal bulb retractor in order to pull the bladder down. The bulb is inserted empty and is then inflated, when it is easy to secure the presentation of the prostate in the wound in the perineum. The operation as thus performed is very safe as the field of operation is in sight and there is constant opportunity for the operator to assure himself of just where he is working. Dr. Syms has used this instrument and method in nineteen cases. All of them have good function except one in which there had been some purulent complications before the prostatectomy was done.

Results of Operation.—Careful examination of the specimen as removed shows that no mucous membrane was cut away with the prostate and that consequently no part of the bladder or urethra was excised. This is an important point in the removal of the prostate, for strictural complications and relapses of the difficulty of urination, besides the danger of sepsis and infection, are liable to follow the removal of mucous membrane. The patient considers himself completely cured. He is able to retain his urine from four to six hours during the day and does not have to get up at night at all.

Prostatectomy Necessary.—Dr. Newman said in discussing Dr. Syms' case that an examination of the specimen shows that nothing but enucleation would have been of assistance in this case. The suprapubic route for the removal of the prostate is easier and more satisfactory than the perineal. Most of the work in the perineum must be done in the dark. The majority of patients are not satisfied to submit to enucleation of the prostate, though this is sometimes the only remedy for their urinary troubles. Practitioners should oftener suggest the removal of the prostate in certain of these cases, and gradually accustom patients to the idea that ultimate removal may be the only method of relieving their symptoms.

Simplified Prostatectomy.—Dr. Goulay said that Dr. Syms' instrument and his technic for the removal of the prostate has greatly simplified the perineal section in these cases. Dr. Goulay has always opposed the suprapubic method of operation for enlarged prostate. It adds to the danger of complications because of adhesions, the possibility of septic infection, the binding of the bladder to the abdominal wall by adhesions, and so forth. Dr. Goulay has seen two of the cases as treated by Dr. Syms and is very well satisfied with the method of treatment and the results.

Better than Bottini's Method.—Dr. Syms said in closing the discussion that this method of perineal removal of the prostate is in his experience better and more satisfactory than Bottini's operation. The tunneling of the prostate by means of the heated knife is liable to make an incomplete operation and is much less safe than the direct removal of the prostate by his method. After perineal prostectomy there is no temperature, no complication, no shock, and good drainage is provided. The mortality of the operation in reasonably expert hands is practically *nil*. The morbidity is very slight, the relief afforded is complete, and lasting. So far there has been no recurrence of symptoms.

Vaginal Route in Pelvic Disease.—Dr. J. Riddle Goffe said that all forms of gynecological work in surgery can be done by the vaginal route. Even surgical operations for cancer may well be performed in this way. At the present time and until surgical minds are made up as to what the result of complete clearing out of the pelvis in these cases will ultimately bring with it, the only operation that is indicated for cancer of the uterus is vaginal hysterectomy.

Even cysts of the ovary may be tapped and then the ovarian tissues drawn down and removed. Abscesses may be tapped and then all infected tissues removed much more safely and with much less danger of producing peritoneal infection than by the abdominal route.

Advantage of Vaginal Route.—One of the special advantages of operating by the vaginal route is the avoidance of all danger of hernia in the operation wound after the patient's recovery. No matter how carefully operations are done, no matter how expert the surgeon, a certain proportion of patients in whom an abdominal incision has been made will develop hernia. Besides this the scar in the abdominal wall is unsightly and in unmarried women particularly very undesirable. The operation on the vagina leaves absolutely no trace and a hernia has never been known to occur. It is practically impossible. After the operation the patient can go home at the end of the fourth week and perhaps even at the end of the third week. There is no need to wear an abdominal binder for months afterward, nor to wear a support for a long time.

Vaginal Fibroid Operations.—Most cases of fibroids can be operated on through the vagina. Whenever the tumor is confined to the true pelvis this is the route of election. If the tumor is large enough to go beyond the limits of the true pelvis, then operation through the vagina is too slow and difficult. It is not so much the patient as the surgeon who must be spared the labor of cutting up and removing so large a tumor.

Dermoidectomy Per Vaginum.—It is sometimes thought that dermoids should be operated on preferably by the abdominal route. Dermoid cysts may be punctured, however, a certain amount of their fluid contents evacuated, and then the tumors brought down for easy removal by the vaginal route. Dr. Goffe has removed even large tumors in this way with perfect satisfaction and without danger to the patient.

Low Mortality.—The most important features of operations *per vaginam* is the fact that the mortality of the procedure is in reasonably skilled hands practically *nil*. Drainage is always good, the danger of septic infection of the peritoneal cavity is very little and Nature is given a most favorable opportunity to throw off any septic material that may have gained entrance to hitherto uninfected tissues.

Double Salpingectomy.—Dr. William R. Pryor said that gonorrhea, it must be remembered, travels by continuity of tissue and not through the lymph-spaces, as does septic material. Consequently, if an abscess occurs in the tube on one side there is every reason to suspect the presence of infective material in the tube on the other side. The infection has come from the fundus of the uterus and very probably both tubes have been involved. If there is the slightest suspicious appearance in the other tube, it should be removed.

Complications Requiring Abdominal Operation.—In certain cases the abdominal rather than the vaginal route for operation must be chosen. When there are appendiceal complications for instance, the abdominal route is preferable because it is difficult to clear out an appendiceal abscess through the vagina. When gangrene of the colon has occurred as the result of purulent conditions, usually appendiceal in origin, then the abdominal route is better. In 189 cases under Dr. Pryor's treatment, during the last few years, 83 per cent. proved operable through the vagina. There remain a certain number of cases that cannot be operated by the vaginal method. We have learned in recent years that retroflexion of the uterus, especially where the vagina has become shortened as the result of the downward malposition of the uterus, should be let alone. No good is ever accomplished by the operation.

Technic of Vaginal Incision.—The incision for vaginal operative gynecology may be made through the anterior or the posterior fornix. The incision in Douglas's pouch gives better drainage while the patient is lying down and is the preferable method for most operators. There are men of large experience, however, who prefer to make their section between the uterus and the bladder.

Fibroidectomy.—As a general rule, it seems best not to operate upon fibroids except by complete extirpation of the uterus. The growth of fibroids seems to be due to a fibrosis or tendency to fibrotic growths. This is a sort of diathesis and though several tumors are removed, others may remain, the irritation of operation may cause them to increase in size and they will give symptoms which will compel removal later. If the tumor alone is removed the woman should always be warned of the danger of recurrent symptoms because of the growth of other fibroid tumors.

Etiology.—The growth of fibroid tumors occurs from embryonic foci, that is, from material included within the uterine walls that has never reached the full development destined for it during its embryonic period. These fibroid foci are awakened into activity by increased blood-supply to the uterus, or by some irritant that causes special developmental reaction in the tissues. Their growth is provoked therefore by pregnancy, or sepsis, or trauma. As a rule, then, uteri containing fibromata should either be let alone or radical hysterectomy should be done.

Anterior Dermoidectomy.—Owing to the position of the genital organs during the formation of the uterus and ovaries, dermoids usually occur anterior to the uterus. They are better reached, therefore, by an incision through the anterior cul-de-sac followed by stripping the vagina from the bladder. There is usually no difficulty in removing them through the vagina and plenty of room for this purpose can always be secured.

Ectopic Gestation and the Vaginal Route.—It used to be the custom to wait for pathognomonic symptoms in cases of ectopic gestation before suggesting operation. This often involves

serious danger for the patient. By the vaginal method an incision can be made that will at once decide how serious is the condition that is present. If the condition is found to be really one of extra-uterine pregnancy it can be cleaned out and the tissues left to take care of themselves. Parenchymatous oozing can be stopped by pressure, larger vessels can be caught and ligated and the operation can be rapidly completed. This is a very safe method of operating under all circumstances. In general the vaginal route has many advantages and very few disadvantages. It furnishes good drainage, decreases the risk for the patient, absolutely precludes all possibility of hernia and it leaves no ugly incision wound.

Vaginal Route Not New.—Dr. Brothers said that the vaginal route for gynecological surgery was suggested a good many years ago. Dr. T. Gaillard Thomas of New York did some vaginal work, but gave it up because of the technical difficulties involved. Gynecology through the vagina is not an easy proposition. It owes its present popularity to the work of Mackenrodt in Berlin who used it originally for vaginal fixation of the uterus. It is scarcely fair to take an estimate of the value of the vaginal route in gynecology from a surgeon who does most of his work by the vagina, nor, on the other hand, from one who does most of his by the abdominal incision. There are many conditions that may require either one of these methods of operation and their suitability can be best determined by a surgeon who does not confine himself to either form.

Experience in Both Methods.—Dr. Brothers has had an experience of about one hundred operations by each route. There are many advantages attached to vaginal operation, but it requires special expertness. It is not so easy as operation by the abdominal route, because of the limited field of operation. By the abdominal method blood-vessels are under the eye and give no cause for disquietude. In the vagina oozing occurs, especially in certain patients, and the free bleeding makes nice operating extremely difficult. There is no question that the vaginal route is less dangerous. Dr. Brothers' mortality has been *nil*, but this is not true of all vaginal operators. Dr. Brothers knows of two recent deaths.

Indications for Abdominal Operation.—Pus tubes, because of the presence of abdominal adhesions, should always be operated on through an abdominal incision. In these cases the adherent intestines are apt to make the ovarian region not easily accessible. If there are appendicular complications the abdominal route should be chosen. Dr. Brothers has operated upon 85 cases of pus tubes, 25 of them *per vagina*. He employs the latter method of operating less, however, as his experience increases. The practitioner should not require the surgeon to do a vaginal operation, unless the surgeon's own judgment and his expertness in this method of operating make him adopt it for himself in any particular case.

Spread of Gonorrheal Infection.—Dr. Delphey said that there is undoubtedly more shock in operations through the abdomen than through the vagina. For this reason, if no other, the vaginal route should be chosen whenever possible. Surgeons who operate should consult not their own ease, but the safety of the patient. With regard to the spread of gonorrheal infection, the occurrence of buboes shows that the gonococcus may spread through the lymph as well as by continuity. It is true that most cases of so-called gonorrheal buboes are really examples of secondary infection, but in a certain number of cases pure cultures of the gonococci were found in the pus from these inguinal lesions.

Presence of Adhesions.—In closing the discussion Dr. Goffe said that the presence of adhesions is not an indication for operation through the abdomen. As a rule, it is much easier to break up adhesions from below. In order to free organs it is usually necessary to get beneath the mass in order to lift it up. It is much easier to do this from the vagina. The lines of cleavage are not here so hard to find. Undoubtedly operation *per vaginam* requires special experience. This experience is not, however, so highly specialized as is sometimes said. Then the only reason for the specialist is the possibility of greater conservatism. Any general surgeon can remove diseased tissues. It requires the special experience of the gynecologist to decide how much shall be removed and how much can with safety be allowed to remain.

Abdominal Gunshot Wounds.—Dr. Henry Roth read a paper on penetrating gunshot wounds of the abdomen without injury to the abdominal contents. It is an established fact that penetrating wounds of the abdomen may occur without any injury of the intestines or other viscera. Malgaigne doubted this. Larrey was sure that he had seen one case. During the Civil War nine such cases occurred and Stimson has reported some cases. In one of Stimson's cases the wound was made three inches to the left of the umbilicus; only a small amount of blood excluded, no inflammatory reaction occurred, and the patient made an uneventful recovery. In another case the wound was made one inch below and to the left of the umbilicus and the bullet from a 32-caliber revolver was extracted from the muscles of the back at a point about three to four inches above the iliac crest. In a third case the wound was made by a 44-caliber revolver. It was in the right hypochondrium; an abdominal section was made, but no serious visceral penetration was found. The bullet had passed so close to the intestine as to wound the serous and muscular coat, but it had not perforated the bowel, the mucous membrane remaining intact.

Dr. Roth's Case.—The patient wounded himself with a 22-caliber revolver. The bullet passed through his hand before entering his abdomen. This made it very difficult to decide the direction which the bullet took, and no traces of it could be found. After the shot the patient vomited some, but there was very little pain.

There was slight bleeding and the family physician thought it advisable to probe for the bullet. He failed, however, to find any trace of it. After twenty-four hours as the patient was still restless, it was deemed advisable to send him to the hospital. On admission his temperature was 100.6° F., his pulse was about 110; his urine was normal. There was no constipation nor tympanites, and there had been no bleeding since shortly after the infliction of the wound.

Track of the Bullet.—The wound in the abdomen was situated below and one inch to the right of the umbilicus. There was slight tenderness in the neighborhood of the wound, but none over the rest of the abdomen and there was no distention. A director introduced into the bullet wound seemed to show that the bullet had passed downward. It was deemed safer under the circumstances to do a laparotomy. When an abdominal incision was made it was found that the director had made a false passage. The track of the bullet could be followed very closely by the discoloration produced by its passage. The peritoneum was wounded slightly, but direct evidence of penetration could not be found and the abdominal cavity seemed to have been opened by the probe. No wound of the omentum was found, no injury of the spleen had occurred, as could easily be determined, for there had been little intraperitoneal bleeding. There was some hemorrhagic effusion into the peritoneum, but there were no evidences of peritonitis nor of any infection of the peritoneal cavity by intestinal contents.

Treatment and Result.—The abdominal cavity was washed out with a large amount of hot saline solution and then closed. The patient made an absolutely uneventful recovery, all temperature and restlessness disappearing shortly after the closure of the abdominal incision. About two weeks after his admission to the hospital he was about to go out when a final examination disclosed the location of the bullet. It was found in the abdominal wall of the opposite side imbedded in the abdominal muscles. It had not penetrated the abdominal cavity, but had only wandered between the layers covering the abdomen. It was removed under local anesthesia.

Practical Conclusions.—In military surgery there is neither the time nor, as a rule, the proper aseptic precaution needed for prompt operation upon the abdomen. Therefore the practical rule followed in military surgery of treating wounds of the abdomen expectantly seems a good one. In civil life, however, it seems more advisable to open the abdomen, follow the bullet and determine what injuries have been inflicted. Usually some injury of the abdominal viscera will be found, and laparotomy is therefore called for as soon as the patient rallies from the primary shock. Valuable aid will be given the surgeon by the discoloration produced by the bullet. Aseptic laparotomy adds very little to the danger—in fact, it can scarcely be said to add materially to the patient's risk. In the great majority of cases, however, prompt interference will be needed and will save life. A surgeon should not delay for conclusive symptoms of peritoneal involvement, for this always implies a serious risk to the patient, and it will often be impossible to save life under these circumstances.

Wound of Mesentery.—In discussing Dr. Roth's paper, Dr. Goulay said that he has found an encysted bullet in the mesentery of a subject in the dissecting-room in a case in which there had been no injury of the intestines. The wound of entrance into the abdomen had been directly in front, so that somehow the bullet succeeded in finding its way between the coils of intestine. Of course, other such cases have been reported.

Danger of Probing.—Dr. Gallant said that Dr. Roth's case emphasized very clearly indeed the necessity for letting gunshot wounds alone. They should not be probed. If treated as a superficial wound by aseptic sealing, it will heal promptly. He has never seen a gunshot wound suppurate that had not been probed. Especially abdominal wounds must not be probed. If anything is to be done, free incision should be made, but no attempt should be made to follow the track of the bullet with a probe.

THERAPEUTIC HINTS.

The Nasopharynx in Scarlatina.—A grave danger to scarlatina patients is the invasion of the nose by streptococci and their associates. The visible pharynx is disinfected every hour with

℞	Tinct. iodi.	2.0 (ʒss)
	Potass. iodid.	1.0 (ɱxv)
	Ac. carbol.	0.7 (ɱx)
	Aq. q. s. ad.	120.0 (ʒiv)

This may safely be given in teaspoonful doses to a one-year-old child for several days. The infiltrated mucosa should be irrigated with 1- to 5-per-cent. ichthyol solution every six hours. When the pharyngeal obstruction will not allow of efficient irrigation, a 50-per-cent. alcoholic solution of resorcin, introduced on each side of the uvula, will often be sufficient to open the passage and permit of easier breathing and proper irrigation.—A. SIEBERT in *Archives of Pediatrics*, Aug., 1901.

Impetigo Contagiosa.—Scrub the affected part with warm water and soap, and cover with five-per-cent. carbolized vaseline, or five-per-cent. carbolic zinc ointment, or half strength ointment of ammoniate of mercury. If many crusts, remove by soaking with hot oil or water before applying the ointment. In the bullous form prick the bullæ at their most dependent part to let the fluid escape.—G. T. JACKSON in "Diseases of the Skin."

Umbilical Hemorrhage in Babies.—The arterial power being greatest in the abdominal cavity and near the umbilical ring, the cord must not be cut near the body. Two ligatures are a fair preventive of hemorrhage. Tight bandages

should be avoided. If the cord is cut too short or torn off, and the vessels cannot be secured and tied, two harelip needles may be run through the abdominal wall, and a strong ligature tied beneath them. Moderate compression of the wound, which has been covered with iodoform or salicylic-acid and starch powder and borated cotton by means of a bandage, will serve well. In hemophilia, plaster of Paris has sometimes proved successful and also the actual cautery. Ligation by a running suture is often useless, on account of bleeding from the stitch-channels.—A. JACOBI in "Therapeutics of Infancy and Childhood."

Influenza.—For the influenza as such there is no treatment. The headache, if dependent on inflammation of the frontal sinuses, can be relieved by local application to the nose. For the general headache and pains, phenacetin, in doses of gm. 0.3 (gr. v) every two hours, is the most reliable drug; of less efficacy are antifebrin, antipyrin, morphine and the bromides. The inflammations of the pharynx and tonsils may be alleviated by the local application of cocaine and the internal use of aconite and sodium salicylate. For the bronchitis and pneumonia we employ the ordinary methods of treatment, except when there is a disposition to general venous congestion and failure of the heart's action. In these cases attention to the condition of the circulation is of the greatest consequence. Good results may be obtained by digitalin, mg. ⅛ (gr. $^1/_{500}$), aconitine, mg. ⅙ (gr. $^1/_{375}$), and whisky. For the gastritis we employ small doses of morphine, cocaine, gm. 0.006 (gr. $^1/_{10}$), or sulfonal, gm. 0.2 (gr. iv), mixed with milk. No matter how irritable the stomach may be, I do not believe it wise to let the patients go for many days without feeding them by the mouth. Feeding by rectum amounts to very little for these patients. Colitis is to be treated by rest in bed, restricted diet, and a little opium.—FRANCIS DELAFIELD.

Melena Neonatorum.—The quantity of blood evacuated from the bowels is sometimes enormous, particularly as the blood of the newborn constitutes only five per cent. of the baby's weight. The cases complicated with vomiting are the worst, and are found to have stomach or duodenal ulcers. Competent respiration and an aseptic umbilical wound are the best preventives. The treatment consists of tincture of chloride of iron in drop doses, ice to epigastrium, warmth to limbs, and the administration of food at a low temperature.—A JACOBI in "Therapeutics of Infancy and Childhood."

Erythema Exudativum Multiforme.—Villemin maintains that iodide of potassium, at least gm. 2.0 (gr. xxx) a day, is almost a specific and will abort relapses. Quinine, gm. 1.0-2.0 (gr. xv-xxx), and sodium salicylate, gm. 3.0-4.0 (gr. xlv-lx), a day sometimes abort or check the disease. Arsenic may be tried in chronic cases. The treatment is mainly symptomatic, and directed to relieving constipation, regulating diet, aiding digestion, ameliorating rheumatism or toning up the system. In obstinate cases the patient should be put to bed. Locally, any alkaline solution will afford relief such as

℞ Pulv. calamin. prep. ... 3.0 (gr. xlv)
Zinci oxid. ..... 2.0 (gr. xxx)
Liq. calcis ad. ..... 60.0 (℥ii)

Or liquor plumbi subacetatis diultus, or lead-and-opium wash. Sometimes a simple dusting-powder will do. In erythema nodosum rest in bed is essential and salicylates are especially indicated. —G. T. JACKSON in "Diseases of the Skin."

Etiology of Whooping-Cough.—In expectorations taken from a large number of cases of whooping-cough G. JOCHMANN (*Ctblt. f. Bäk.*, July 12, 1901) has found small, influenza-like bacilli which can be divided into separate classes by their relation to Gram's stain. In this way he accounts for the divided views of observers in regard to the biological properties of the rods seen in this kind of sputum. He thinks that the bacillus found by Czaplewski and Hensel is not the cause of pertussis, as he only found it in four cases and, moreover, it cannot be cultivated on blood-agar. In eighteen cases of pertussis he has isolated a bacillus which grows exclusively on culture media containing hemoglobine.

BOOKS RECEIVED.

The MEDICAL NEWS *acknowledges the receipt of the following new publications. Reviews of those possessing special interest for the readers of the* MEDICAL NEWS *will shortly appear.*

LECTURES ON THE HISTORY OF PHYSIOLOGY DURING THE SIXTEENTH, SEVENTEENTH AND EIGHTEENTH CENTURIES. By Sir M. Foster. 8vo, 310 pages. Cambridge, University Press.

CLINIQUES MÉDICALES ICONOGRAPHIQUES. Par MM. P. Haushalter, G. Etienne, L. Spillmann and Ch. Thiry. Fascicule. Quarto, 48 pages. Illustrated. G. Carré et C. Naud, Paris.

REPORT OF SANITARY INVESTIGATIONS OF THE ILLINOIS RIVER AND ITS TRIBUTARIES. Illinois State Board of Health. 8vo, 219 pages. Springfield, Ill.

SURGICAL APPLIED ANATOMY. By Sir Frederick Treves. New Edition. 12mo, 572 pages. Illustrated. Lea Brothers & Co., Philadelphia.

THE DIAGNOSTICS OF INTERNAL MEDICINE. By Dr. Glentworth Reeve Butler. 8vo, 1,059 pages. Illustrated. D. Appleton & Company, New York.

A MANUAL OF SURGICAL TREATMENT. By Drs. W. Watson Cheyne and F. F. Burghard. Vol. V. 8vo, 470 pages. Illustrated. Lea Brothers & Co., Philadelphia and New York.

ESSENTIALS OF DISEASES OF THE EYE. By Dr. E. Jackson. Saunders Question-Compends, No. 14. W. B. Saunders & Company, Philadelphia and London.

BULLETIN OF THE DEPARTMENT OF LABOR. No. 35, July, 1901, Washington.

THE MUSHROOM BOOK. A Popular Guide to the Identification and Study of Our Commoner Fungi, With Special Emphasis on the Edible Varieties. By Nina L. Marshall. 8vo, 167 pages. Illustrated. Doubleday, Page & Co., New York.

TRANSACTIONS OF THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION. Vol. XIII. Published by the Association.